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Population Bulletin

Poverty in America: Trends and New Patterns

By William P. O'Hare

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Abstract—35.3 million Americans were defined as officially poor in 1983, 15.2 percent of the total population—the highest figures since the mid-1960s. Some attribute continued poverty to increased government social welfare spending launched in the mid-1960s with the War on Poverty; others blame the 1981 Reagan budget cuts for the recent rise. But poverty among the nonelderly is linked much more to economic trends. The number in poverty dropped during the booming 1960s and early 1970s from 39.5 million, 22.4 percent of the population, in 1959 to a low of 23 million, 11.1 percent of the population, in 1973, fluctuated with the economy to 1978, and then rose sharply. The 1978-83 rise was greatest among groups with traditionally lower poverty rates who were harder hit by deep recession and unemployment in the early 1980s—younger adults of working age and their children, male-headed families, and whites. With economic recovery in 1984, the 1984 poverty rate (to be released in late 1985) should be lower than 1983's 15.2 percent. The bulk of increased federal social spending since the mid-1960s has gone to the elderly, aged 65 and over, whose poverty rate plunged from 35.2 to 14.1 percent between 1959 and 1983. The value of "means-tested" Aid to Families with Dependent Children payments and food stamps, not indexed to rise with inflation as is Social Security for the retired elderly, fell 22 percent between 1972 and 1984. In 1983, the poverty rate of blacks was 36 percent versus 12 percent for whites, and 40.5 percent in female-headed versus 9.3 percent in male-headed families. The dearth of "marriageable" black men appears more important than welfare in explaining the increase in poor black female-headed families. Welfare is still needed for vulnerable groups, but poverty and welfare expenditures could be reduced in the long run by expanded government-sponsored job training and educational programs.

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Laid off work in Illinois. The proportion of the total U.S. population below the poverty line rose sharply between 1978 and 1983, from 11.4 to 15.2 percent, after declining from 22.4 percent in 1959 to a low of 11.1 percent in 1973. Most of the 1978-83 rise was accounted for by the "new poor"—younger men and their families who were particularly hard hit by the deep recession and unemployment of the early 1980s.

Poverty in America: Trends and New Patterns

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Americans have recently been bombarded with disparate views on poverty and what should be done about it. Conservative analyst Charles Murray in his much-publicized 1984 book, *Losing Ground: American Social Policy 1950-1980*, contends that government assistance programs launched with the War on Poverty in the mid-1960s have encouraged many of the poor to remain poor and should be eliminated for the able-bodied poor of working age. Liberal stalwart Michael Harrington, whose 1962 book *The Other America* helped spark the War on Poverty, argues that more government aid and employment generation are needed to combat what he described in his 1984 book as *The New American Poverty*, produced by structural changes in the national economy. The National Catholic Conference of Bishops also has decried rising poverty in a draft pastoral letter issued in November 1984, which declared that the United States has a moral obligation to ensure that no one is hungry, homeless, or unemployed. The Reagan administration contends that its 1981 budget cuts have left intact a basic "safety net" for the truly needy; opponents argue the contrary.

Confusion over recent trends in poverty was mixed with political rhetoric in the electioneering of 1984. President Reagan in the first of his televised debates with Democratic presidential contender Walter Mondale insisted that "[Poverty] has begun to decline but it is still going up," alluding, presumably, to the recent slowdown but not reversal in the rise of the poverty rate since 1978. Republican Health and Human Services Secretary Margaret Heckler displayed ignorance of recent trends with her post-debate interview statement that poverty in America was at an all-time low. On the other hand, presidential candidate Jesse Jackson predicted at the summer's Democratic National Convention that "By the end of this year [1984], there will be 41 million people in poverty." This contradicts most analysts' expectation that improving economic conditions will reduce the number of persons below the official poverty line from the 35.3 million of 1983, the last year for which statistics are available.

This *Bulletin* attempts to sort out these varied messages about poverty in America with an overview of changes since 1959 in the size and characteristics of the poverty population and some of the ideas put forward to explain these changes. The focus is particularly on the period from 1978 to 1983 when the number of poor rose by 10.8 million, or 44 percent, from 24.5 to 35.3 million, and the poverty rate—the proportion of the total population below official poverty thresholds—rose from 11.4 to 15.2 percent. This had followed declines in the number of poor and the poverty rate from 39.5 million and 22.4 percent, respectively, in 1959 to record lows of 23.0 million people and 11.1 percent in 1973, and fluctuating numbers and rates from 1973 to 1978.

Much recent analysis of poverty covers trends only through the 1970s and thus misses much data that reveals how poverty in the 1980s differs from that of the 1960s. The increase in poverty since 1978 has been pervasive, touching every major demographic group and occurring in every region of the country and in central cities, suburbs, and nonmetropolitan areas alike. And the depth of poverty has grown as the gap has widened between the poverty thresholds and the average income of poor families. On the positive side, however, this report shows that changes in poverty levels are more closely related to the nation's economic health than to social welfare policy, so the economic recovery since 1983 may help reduce the numbers of poor.

Developing appropriate policies to combat poverty requires a clear picture of who is poor and why. Some widespread misperceptions about poverty may be dispelled by the latest data which show, for example, that:

- Most poor people are white not black, though the poverty rate remains three times higher for blacks than whites (36 versus 12 percent in 1983).
- Only 14 percent of the elderly aged 65 and over are poor.
- Just 14 percent of the poor live in inner-city ghettos (poverty areas of central cities). In 1983 a quarter of the poor lived in the suburbs of metropolitan areas.
- Although the poverty rate of female-headed families is more than four times that of male-headed families (40.5 versus 9.3 percent in 1983), most poor people in families live in male-headed families and since 1978 the poverty rate has increased faster for male-headed than for female-headed families.
- Most poor adults aged 22-64 are working or looking for work.
- Only slightly over a third (35 percent) of poor families receive cash welfare benefits.
- "Antipoverty" programs have little to do with helping people get out of poverty.

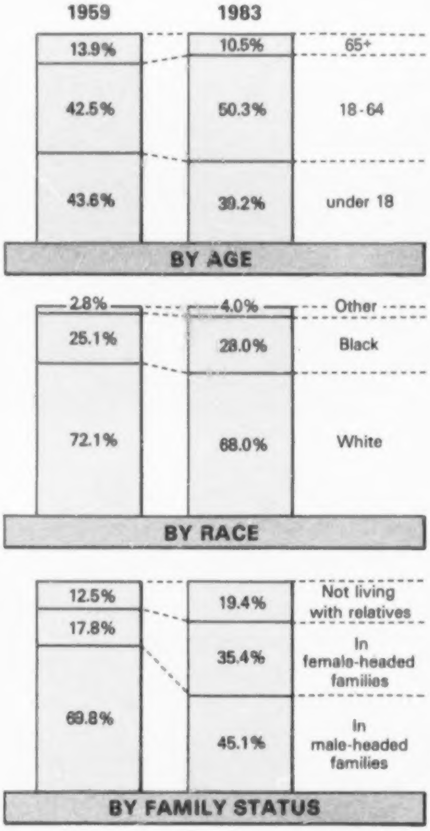
The official poverty measure counts only cash income. Some critics claim that counting in the cash value of benefits such as food stamps, housing subsidies, Medicaid and Medicare would show that the War on Poverty is close to being "won." But a recent Census Bureau study shows that even on this score at least 23.7 to 30.5 million people were poor in 1983 and the number had increased substantially since 1978.

Whatever the statistics, Americans are interested in the poverty population. As a generally compassionate people, we would like to alleviate poverty, though most would probably concede that it cannot be eradicated.

There are also pragmatic reasons for following poverty trends. Changes in the number of poor affect the cost of public assistance which in fiscal year 1984 amounted to $8.3 billion just for the federal share of Aid to Families with Dependent Children, the major federal-state cash assistance program for the nonelderly poor, and $44.2 billion for the federal share of the four chief noncash benefit programs aimed at the poor—Medicaid, food stamps, subsidized housing, and free or reduced-price school lunches. And changes in the number and location of the poor determine the allocation of federal welfare dollars to states and local areas and the additional funds they must earmark to serve the poor in their jurisdictions.

Shifts in poverty figures sway public opinion and the political climate for welfare legislation. Fraught with political and racial overtones, these shifts have been used time after time to make charges and countercharges of failed social policies or cold-hearted treatment of the poor.

Figure 1. The Poor from 1959 to 1983



Some 35.3 million persons lived below the official poverty line in 1983. By age, race, and family characteristics, the poor, who represented 15.2 percent of the total U.S. population in 1983, were a diverse group whose composition had changed since 1959. The quarter century was dominated by two trends—a general decline in poverty during the 1960s and early 1970s and a sharp increase between 1978 and 1983.

Another important trend was the decline of poverty among the elderly. In 1959, 35.2 percent of those aged 65 and over lived in poverty; by 1983, thanks in part to generous increases in Social Security, the figure was down to 14.1 percent. The proportion of all poor people comprised of adults of working age (18-64) grew from 42.5 percent in 1959 to 50.3 percent in 1983. The rise was particularly marked between 1978 and 1983.

Some 35.4 percent of all poor people in 1983 lived in families headed by a woman, up from 17.8 percent in 1959. In 1983, 40.5 percent of persons in female-headed families lived in poverty, versus 9.3 percent in male-headed families.

The proportion of the total population below the poverty line fell from 22.4 percent in 1959 to a low of 11.1 percent 1973, fluctuated about this level to 1978, and then rose to 15.2 percent in 1983.

Some observers attribute increasing poverty to government assistance for the poor, which rose sharply with the launching of the War on Poverty in the mid-1960s. In their view, this assistance has undermined the work ethic and encouraged the formation of female-headed families and welfare dependency and should be eliminated for the nonelderly poor.

Others attribute the upturn in poverty since 1978 to deteriorating economic conditions for younger workers in particular—the loss of well-paid jobs for the lesser-skilled to mechanization, automation, and foreign competition, exacerbated by recession, competition among the swollen baby boom generation, and the rising labor force participation of women. According to this school of thought, welfare assistance for the working-age poor is still needed, along with expansion of government-sponsored job training and educational programs.

It is widely agreed that a growing economy reduces poverty most effectively. With the economic recovery in 1984, the poverty figures for 1984 (available in late summer 1985) should be lower than those of 1983. But it is possible that even if the U.S. economy continues to grow in the second half of the 1980s, some young adults who missed crucial labor market experience in the early 1980s will be left permanently behind.

Partisan policymakers are seldom convinced of the objectivity of any particular study of poverty.

Because the cross-sectional data used to track the poverty population show little change from year to year in the overall demographic characteristics of this group, it is easy to believe that the same people are represented year after year. This perception is reinforced by the "culture of poverty" literature which suggests that a large body of individuals remains stuck at the bottom of the socioeconomic ladder. However, recent research following individual families from year to year shows that there is much movement into and out of poverty.

The data

This *Bulletin* relies primarily on the official government definition of poverty, the most widely accepted measure despite numerous weaknesses. This is sometimes called the Orshansky Index after Mollie Orshansky, the Social Security Administration economist who developed it in 1965 in response to the War on Poverty.

The poverty line was set at three times the cost of obtaining a minimally adequate diet, based on a 1955 survey which showed that poor families at that time spent on average about one-third of their income on food.[1] The index uses a series of income thresholds set in relation to needs, determined by family size, number of children, and age of the householder. People not living in families—called "unrelated individuals" by the Census Bureau—are essentially treated as one-person families.

These thresholds are updated each year to account for inflation. In 1983 the threshold was $10,178 for an average family of four and the range was from $4,775 for a single person over 65 to $20,310 for a family of nine or more persons.[2] It was these thresholds that produced the official count of 35,266,000 persons living below the poverty line, 15.2 percent of the total U.S. population, based on income in calendar year 1983.

The chief current criticism of the official measure is the claim that it overstates the number of people in poverty because it counts only cash income and not the in-kind food, housing subsidies and medical care assistance which obviously raise the living standards of many low-income families. In August 1984 the Census Bureau reported that counting in the cash value of these benefits would have lowered the number of poor people for 1983 to between 23.7 and 30.2 million, or 10.2 to 13.0 percent of the total population, depending on the method used to assign a cash value to the benefits.[3]

It is also pointed out that the number of poor can be overstated because of underreporting of income in the Census Bureau's Current Population Survey which gathers the data used to measure the poverty population.

Adopting measures to count noncash welfare benefits without raising poverty thresholds could mean fewer Americans would be eligible for welfare programs and probably would mean less federal money for those programs. Another political issue is that some view it unfair that the government should count noncash benefits received by the poor as income and not the noncash benefits going to the nonpoor, such as employee health benefits, business lunches, etc.[4]

Some critics argue, on the other hand, that the official poverty measure is set too low and underestimates the numbers of poor. For one thing, it is based on pretax income rather than aftertax income which better indicates resources available to a family. An April 1984 report of the Center on Budget and Policy Priorities noted that following the 1981 tax changes, the federal income tax threshold (the point at which low-income working families must start paying income tax on their wages) has "dropped far below the poverty line, so that substantial numbers of those who live in poverty now have a steadily increasing portion of their small incomes eaten up by federal income taxes." The working poor are also paying steadily more in Social Security payroll taxes.[5]

In addition, the food plan used as a

basis for the poverty measure has now been outdated by a new plan for a minimally adequate diet, based on recent nutritional studies, that would be more costly, and in any case was originally intended only as a stopgap diet while funds are low. Also, data of the early 1980s show that poor families now spend only one-fifth of their funds on food.[6]

Mollie Orshansky, in the late 1970s, estimated that a poverty index revised to take account of new information would produce a poverty population about 38 percent higher than the official measure.[7]

Public opinion polls also indicate that most Americans would consider the poverty line too low. Respondents to a 1983 Gallup poll said a family of four needed an income of $15,400 to get along in the average community.[8] This was 50 percent higher than the official poverty threshold of $10,178 for such a family in 1983.

The official poverty line is set by the Office of Management and Budget but eligibility guidelines for program assistance to the poor are set by those who run the programs and are almost always higher than the poverty line. The eligibility requirement for many programs, such as legal aid, is income below 125 percent of the poverty thresholds, which included 47 million people in 1983. The cutoff is 130 percent of the poverty threshold for food stamps and up to 195 percent for reduced-price school lunches. President Reagan has argued that the eligibility cutoffs are too high and allow programs to serve persons other than the "truly needy." A more reasonable interpretation would seem to be that official poverty thresholds are unrealistically low.[9]

The official poverty measure obviously has deficiencies, but many of these offset each other and others have trivial impacts. To show trends over time and group differences, as in this *Bulletin,* the measure serves reasonably well.

The Bureau of the Census is the major supplier of statistical information on the poor. In the 1960, 1970, and 1980 decennial censuses, sufficient information was collected to determine poverty status. Between the censuses, information on cash income (including welfare income, if any) and noncash benefits from government programs received in the previous calendar year is collected in the March round of the Current Population Survey, a monthly Census Bureau survey of about 60,000 households across the nation. This information is used for an annual Census Bureau statistical portrait of the population below the poverty level and periodic reports on special poverty topics, such as receipt of noncash benefits.

A particularly useful source of information on movements into and out of poverty is the University of Michigan Panel Study of Income Dynamics. Designed to study disadvantaged groups, this study has gathered annual information since 1968 on some 5,000 families across the nation, including members who have left the original families.

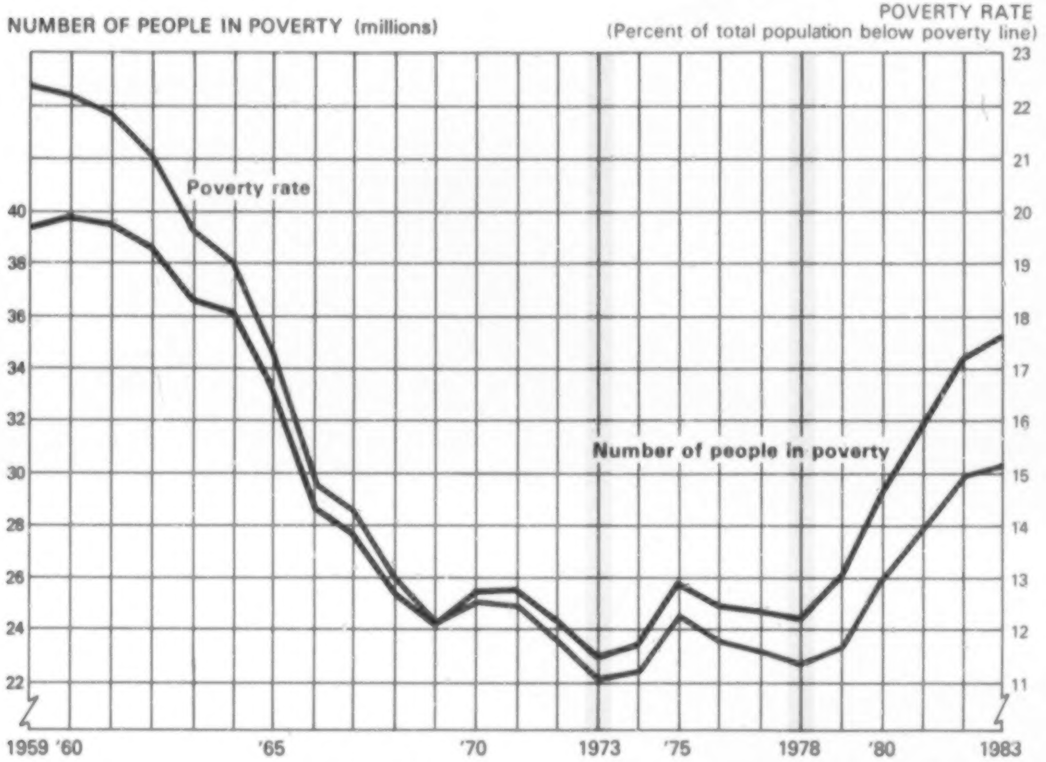
As results become available, the Census Bureau's Survey of Income and Program Participation, which began fieldwork in the fall of 1983, is likely to provide the most comprehensive information on low-income groups. Interviewing the same people in samples of 20,000 at four-month intervals over two and a half years, it is gathering information more detailed than possible from the household-based Current Population Survey on income, assets, and noncash benefits received from private business programs as well as the government.

Poverty Trends: 1959-1983

Figure 2 (page 8) shows the three distinct periods of poverty change since 1959, the first year for which the official poverty measure was used. Between 1959 and 1973 the number of poor fell from 39.5 million to just under 23 million and the poverty rate was halved from 22.4 to 11.1 percent. This continued the trend from 1950 to 1960 when the poverty rate fell by nearly ten percentage points, according to unofficial estimates.

From 1973 to 1978 the figures hovered

Figure 2. Number of Poor and Poverty Rate: 1959-1983



Year	Number of people in poverty (in 1,000s)	Poverty rate = Percent of total population below poverty line
1959	39,490	22.4
1960	39,851	22.2
1961	39,628	21.9
1962	38,625	21.0
1963	36,436	19.5
1964	36,055	19.0
1965	33,185	17.3
1966	28,510	14.7
1967	27,769	14.2
1968	25,389	12.8
1969	24,147	12.1
1970	25,420	12.6
1971	25,559	12.5
1972	24,460	11.9
1973	22,973	11.1
1974	23,370	11.2
1975	25,877	12.3
1976	24,975	11.8
1977	24,720	11.6
1978	24,497	11.4
1979	26,072	11.7
1980	29,272	13.0
1981	31,822	14.0
1982	34,398	15.0
1983	35,266	15.2

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," *Current Population Reports*, Series P-60, No. 124, 1980, Table 1, and "Characteristics of the Population Below the Poverty Level: 1983," *Current Population Reports*, Series P-60, No. 147, 1985, Table 1.

near these low points. The small rise in the number of poor to 24.5 million in 1978 was partly due to the increasing size of the total population. The poverty rate was pushed over the 12 percent mark, to 12.3 percent, only in one year, 1975, largely due to a recession-induced unemployment rate of 8.5 percent. This waffling of the poverty rate partly reflected diverging trends among the elderly and the nonelderly. Poverty among the elderly continued to fall during the 1970s, but poverty among the nonelderly bottomed out.

Some observers contend that omission of noncash benefits from the official poverty measure masks what was a continued decline in the real level of poverty during the mid-1970s. By 1975 noncash benefits made up more than half of means-tested government welfare assistance, compared to only 25 percent in 1965.[10] According to one study, counting in the cash value of these benefits would have lowered the 1976 poverty rate from 11.8 to 6.7 percent.[11]

The attention drawn to this issue by a 1977 report of the nonpartisan Congressional Budget Office prompted Congress to mandate a Census Bureau study of the topic.[12] Meanwhile, many analysts were calling for a reassessment of poverty trends to reflect increases in noncash benefits.[13] Martin Anderson of Stanford University's Hoover Institution and later President Reagan's chief domestic policy adviser testified to Congress in 1980 that counting noncash benefits in the official poverty measure would show that "the 'War on Poverty' that began in 1964 has been largely won."[14] That conclusion proved to be premature.

By 1983 the number of poor according to the official measure was 35.3 million, the highest since 1964, and the poverty rates of 1982 and 1983—15.0 and 15.2 percent—were the first above 15 percent since 1965. As noted, the August 1984 Census Bureau report indicates that counting noncash benefits along with cash income in the poverty measure lowers the absolute numbers and the percentages in poverty.[15] Nevertheless, three methods for valuing food stamps, medical care (Medicaid and Medicare), and housing subsidies all show that the proportion of people in poverty rose about four percentage points between 1979 and 1983.

The "depth" of poverty has also increased. Between 1978 and 1983 the poorest of the poor, families with annual incomes under $5,000 (in 1983 dollars), increased from 3.9 to 5.7 percent of all families.[16] At the same time, while the poverty thresholds stayed the same in real terms (that is, rising only as much as inflation), the median income for poor families measured in 1983 dollars fell from $5,507 to $4,225 and the poverty gap—the average amount between the cash income of the poor and the poverty thresholds—widened from $2,947 to $3,557.[17] The gap was not being filled by noncash benefits. From 1979 to 1983 the number of poor persons increased by 35 percent, but federal expenditures on means-tested noncash benefits rose only 10.4 percent, from $45.2 to $49.9 billion (in constant 1983 dollars), so noncash benefits per poor person fell.

Perspectives on Poverty

Social analysts Charles Murray and Michael Harrington are leading spokesmen for two very different schools of thought on poverty among the able-bodied poor of working age.[18] Murray focuses on the end of the poverty decline in the 1970s; Harrington on the upturn into the early 1980s. But both are useful to sort out factors that might explain trends since 1959.

Murray contends that welfare benefits of the War on Poverty, offered to the poor as a right rather than a handout, have among blacks in particular discouraged work and encouraged formation of female-headed families, the most likely to be poor. (See page 10 for a description of War on Poverty programs.) He credits a strong economy with the fall in poverty during the 1950s and 1960s but blames social policy for the failure of the decline to continue in the 1970s and argues that

The War on Poverty

Part of President Lyndon Johnson's "Great Society," the War on Poverty was formally launched with passage of the Economic Opportunity Act in August 1964. It included initiation or expansion of a wide variety of programs designed to provide the poor with a safety net of basic income, medical care, food, and shelter or—as with job training and educational programs—to offer an escape from poverty.

Benefits were increased for Aid to Families with Dependent Children (AFDC), Social Security, and subsidized school lunches and housing. New programs included: food stamps, Medicare (for the elderly), Medicaid (for all poor), Supplementary Security Income, VISTA, Job Corps (later part of CETA, the Comprehensive Employment and Training Act), Community Action, Model Cities, Legal Aid, Headstart, school aid for high-poverty areas under the Elementary and Secondary Education Act, Upward Bound, Foster Grandparents, and many more. Most programs continued to expand through the 1970s, but since 1981, many have been sharply reduced (e.g., AFDC, food stamps, subsidized housing) or ended (e.g., CETA).

all government assistance programs should be eliminated for the able-bodied poor of working age. This view touches a raw nerve in the American public who watched social spending increase dramatically from the mid-1960s to the early 1980s with little or no visible impact on lowering poverty.

Harrington, on the other hand, views poverty among the working-age population as a direct response to economic trends—falling during the boom time of the 1960s, going up and down like the recession-pocked economy in the 1970s. The high unemployment and "new poverty" since the late 1970s he blames on structural changes in the economy that have made it much more difficult to obtain and keep decent-paying jobs with prospects for advancement. With mass-production manufacturing now going to Third World countries and automation in the U.S., high-paid unionized manufacturing jobs are being eliminated, to be replaced by low-paid, unstable service jobs. To protect workers from the hardships of economic dislocations, he calls for increased, or at least restored government assistance (the large bulk of which has hitherto gone to the elderly, as he points out), along with policies to achieve full employment.

Which is right? Is poverty increasing because antipoverty programs have unwittingly undermined the work ethic, as Murray implies, or is the nation's economic health the key, as Harrington argues?

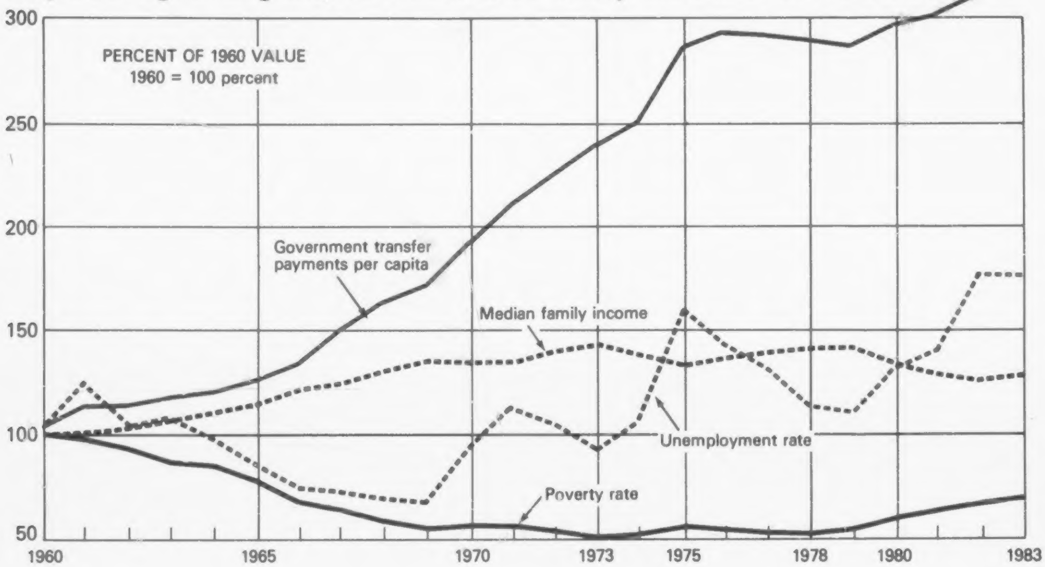
Anecdotal evidence could be used to build a case for either view. Press stories feature welfare "cheats," who underreport job earnings, and slackers who refuse to work, and also industrious citizens who have simply fallen on hard times. But this *Bulletin* looks at the total poverty population and draws on the two views to see how well they explain broad trends over the past 25 years, particularly the recent upsurge in poverty.

Explaining the Trends

Figure 3 shows yearly changes from 1960 to 1983 in the poverty rate and three key measures one might expect to see reflected in poverty trends: the unemployment rate, government transfer payments per capita, and median family income. The four measures are expressed as percentages of their 1960 values, adjusted for population growth and inflation. The actual values are shown at the bottom of the figure, with per capita transfer payments and median family income held constant in 1983 dollars.

The measures have drawbacks. Me-

Figure 3. Poverty Rate, Unemployment Rate, Government Transfer Payments per Capita, and Median Family Income: 1960-1983



Actual values: 1960-1983

Year	Poverty rate (percent)	Unemployment rate (percent)	Government transfer payments[a] per capita (in 1983 dollars)	Median family income (in 1983 dollars)
1960	22.2	5.5	538	18,907
1961	21.9	6.7	593	19,100
1962	21.0	5.5	597	19,617
1963	19.5	5.7	617	20,335
1964	19.0	5.2	625	21,100
1965	17.3	4.5	656	21,968
1966	14.7	3.8	697	23,123
1967	14.2	3.8	791	23,672
1968	12.8	3.6	853	24,720
1969	12.1	3.5	894	25,636
1970	12.6	4.9	1,003	25,317
1971	12.5	5.9	1,118	25,301
1972	11.9	5.6	1,189	26,473
1973	11.1	4.9	1,264	27,017
1974	11.2	5.6	1,133	26,066
1975	12.3	8.5	1,529	25,396
1976	11.8	7.7	1,562	26,179
1977	11.6	7.0	1,552	26,320
1978	11.4	6.0	1,535	26,939
1979	11.7	5.8	1,526	26,885
1980	13.0	7.0	1,580	25,418
1981	14.0	7.5	1,606	24,525
1982	15.0	9.5	1,670	24,187
1983	15.2	9.5	1,728	24,580

Source: Office of Management and Budget, *Economic Report of the President*, February 1985, Appendix B.

[a] Federal government cash transfer payments include Social Security retirement and disability payments, unemployment insurance, Aid to Families with Dependent Children, Supplemental Security Income, and veterans' benefits. For a description of federal government cash and noncash assistance programs, see pages 26-29.

dian family income does not reflect changing family composition; the unemployment rate does not reflect the rise in families with two workers and leaves out "discouraged" workers; and government transfer payments go to both the poor and the nonpoor. Nonetheless, the indicators capture many of the major changes in American life over the past quarter century.

During the 1960s the poverty rate fell dramatically to 54.5 percent of its 1960 value by 1969. This was accompanied by a 36.4 percent decline in unemployment, a 35.6 percent increase in real median family income, and a 66.2 percent increase in per capita government transfer payments. All three trends are plausible explanations for the poverty decline, so it is difficult to say which had the greatest effect.

It is tempting to see the growth of transfer payments as reflecting the antipoverty programs launched in the mid-1960s and link this with the poverty decline. This would be contrary to Murray's view. But Murray argues—and he is correct—that funding for these programs took off only in the late 1960s, which was *after* the sharp drop in the poverty rate.

During the early to mid-1970s, the poverty rate hovered at 50-55 percent of its 1960 value, while unemployment turned sharply upward and median income growth slowed as the first of the 1970s mini-recessions took hold in the wake of the OPEC oil price hike of late 1973. However, per capita government transfer payments grew even faster than in the 1960s. During the Kennedy-Johnson years of 1961-1968, these payments had grown by 43.6 percent; in the Nixon-Ford years (1969-1976), the increase was 74.7 percent. If government transfer payments had played an important role in the poverty decline of the 1960s, that decline should have been even more rapid in this next period. This clearly did not happen. Nevertheless, one might still conclude that transfer payments had a major impact on lowering poverty up to the late 1970s if one assumes that poverty continued to fall in the 1970s but this was missed in the Census Bureau figures which excluded noncash benefits.

But the picture changed after 1978. Per capita transfer payments continued to climb but the poverty rate turned upward, which was the wrong direction if earlier changes in the poverty level were linked to growth in transfer payments. The poverty upturn is clearly associated with the dramatic increase in the unemployment rate and decline in median family income from 1978 to 1982 (though both leveled off in the following year), just as the reverse was true in the 1960s.

Interpreting the association between government transfer payments and poverty trends is confused because the 1978-1983 growth in these payments could be due to increasing numbers of poor who are eligible for cash welfare rather than overall expansion of government cash assistance programs. But this is not the reason for the growth because most of the payments go to the nonpoor, as detailed later (see page 29).

This is also one reason why there is little relationship between the growth in per capita transfer payments and changes in poverty since 1960. The largest proportion of government cash benefits (Social Security retirement and disability payments and unemployment insurance) is not distributed according to need and goes primarily to the middle class rather than people below the poverty line. Another reason is that most of the cash and noncash benefit programs that are "means-tested" (Aid to Families with Dependent Children, Supplemental Security Income, Medicaid, food stamps, subsidized housing and school lunches) are intended only to provide the poor with a "safety net" of basic income, food, shelter, and medical care and not to boost income above the poverty level. The job training and educational programs that might lead to economic independence are a very small part of the social welfare system, and a part that has been reduced sharply since 1981[19] (see pages 29, 35-36).

Government benefits have expanded greatly since 1960 and have alleviated many of the hardships of poverty, but they have had little to do with changes in the poverty rate of the nonelderly. The limited antipoverty effects of social programs targeted toward the nonelderly have been more than offset by a deteriorating economy in the late 1970s and early 1980s, resulting in the rising poverty rate of 1978-1983.[20]

This increase represents a new kind of poverty. Much of the old poverty is still there, but the increase has not occurred primarily among those groups usually viewed as the most vulnerable. Poverty has gone up rapidly for younger adults of working age and scarcely at all for the elderly of retirement age, 65 and over, and has increased faster among male-headed than among female-headed families and faster among whites than among blacks. Social welfare programs have provided some protection for the vulnerable groups—ill-educated mothers without spouses and their children, the disabled, and certainly the elderly—but there are few safeguards for those expected to avoid poverty through participation in the work force.

Experiences of Younger and Older Working-Age People

Changes in our economy that resulted in growing poverty from 1978 to 1983 have been particularly disadvantageous for younger workers and their families.

Most of the poverty increase in these five years occurred among younger adults and their children. In 1983 the poverty rate for families with a householder under 25 was 29.5 percent, up from 18.5 percent in 1978. For families with a householder aged 45-64, the rate was only 8.7 percent in 1983 and 6.4 percent in 1978. For those in between—with a householder aged 25-44—the figures were 14.2 percent in 1983 and 10.2 percent in 1978.[21] In 1983, 81 percent of children in poor families—compared to 65 percent of all children under 18—lived in a family where the householder was under 45. Of the 6.9 million adults added to the poverty population between 1978 and 1983, 5.5 million were aged 18-44 (see Table 1, page 14).

The figures in Table 1 further suggest that the new poverty is due to the difficulty younger workers now have in finding and keeping a reasonably well-paid job. The 5.5 million increase in poor people aged 18-44 made up half (51 percent) of the total 10.8 million people added to the numbers of poor between 1978 and 1983. The numbers in poverty in this age group went up 93.3 percent for men and 56.9 percent for women. By contrast, the poor among the 45-64 year-old age group went up by less than a million: 33 percent for men and 22.5 percent for women. This supports Harrington's argument that changes in the U.S. occupational structure are causing many sons and daughters of middle-class, blue-collar families to slip into the ranks of the poor, either forced to take low-paying, unstable service jobs or finding none at all.[22] Adults aged 45-64 are more likely to have jobs that keep them above the poverty income level and less likely to lose them in hard times because they are typically more established in their careers if they are white-collar workers and have seniority if they are blue-collar workers.

Most of the elderly of retirement age, 65 and over, are not dependent on wages for income, so changes in the economy are not likely to affect them. The numbers in poverty of this age went up less than half a million, or 14.8 percent, between 1978 and 1983.

The plight of younger adults is partly linked to increased competition for jobs due to the tidal wave of baby boomers (born 1947-1964) in the young working ages in recent years, the loss of jobs to mechanization and automation, and increased female labor force participation. These factors were not so pronounced and did not matter so much in the 1960s

Table 1. Number of People in Poverty, by Age and Sex, 1978 and 1983, and Increase, 1978 to 1983

Age and sex	Number (in 1,000s)		Increase 1978 to 1983	
	1978	1983	Number (in 1,000s)	Percent
All ages				
Males	10,017	15,182	5,165	51.6
Females	14,480	20,084	5,604	38.7
Total	24,497	35,266	10,769	44.0
Under 18				
Males	4,917	6,885	1,968	40.0
Females	5,014	6,922	1,908	38.1
Total	9,931	13,807	3,876	39.0
18-44				
Males	2,832	5,474	2,642	93.3
Females	4,998	7,843	2,845	56.9
Total	7,830	13,317	5,487	70.1
45-64				
Males	1,317	1,751	434	33.0
Females	2,187	2,679	492	22.5
Total	3,504	4,430	926	26.4
65 and over				
Males	951	1,072	121	12.7
Females	2,282	2,640	358	15.7
Total	3,233	3,712	479	14.8

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 11, and "Characteristics of the Population Below the Poverty Level: 1983," Table 11.

and early 1970s when the economy was strong, but began to take their toll in the mid-1970s when economic growth slowed.

The situation for young job-seekers has been exacerbated by the fact that American workers are increasingly competing with foreign workers in an international marketplace, as Harrington emphasizes. In 1966 U.S. exports of machinery and transportation equipment, for example, brought in two-and-a-half times the value of such imports; by 1983 imports exceeded exports by 5 percent.[23] Well-paid jobs for low-skilled labor are drying up as American workers compete with workers in Asia and South America where payscales are a fraction of U.S. rates.

The shifting international distribution of manufacturing jobs is reflected in the changing U.S. occupational structure. The share of the U.S. work force in manufacturing fell from 31 percent in 1960 to 21 percent in 1983. In 1983 there were fewer jobs in manufacturing than in 1970. In the 1960s, an unskilled or semiskilled young person could move into a job on the assembly line and earn enough to support a family. In the 1980s, that kind of job has all but disappeared. Evidence of young people's difficulties in today's job market is the unemployment rate among teenagers which has been running near 20 percent for all teenagers and more than twice that among black teenagers, compared to the 9.5 percent unemployment rate for the total work force in 1982 and 1983.

In addition, mechanization is now eliminating jobs of workers who have already put in ten or more years. Those who have jobs are obviously aware of their precarious position. Job protection was more important than wage increases in the industry-setting contract negotiations between the United Automobile Workers and General Motors in the fall of 1984, and the Department of Labor reports that there were fewer strikes in 1984 than in many years past.

While workers who have kept their manufacturing jobs are doing well, many of those who have been laid off or failed to find such a job are now battling poverty and many are losing the battle. This produced a paradox in 1983 in Flint, Michigan, a quintessential manufacturing city, which had both the highest earnings per worker and the highest unemployment rate of any major U.S. city in that year.

Murray evidently feels structural changes in the economy had no bearing on poverty levels over the past 20 years. Harrington believes they are the root of the problem.

Changing Demographics of the Poor

The poor in America add up to far more than a handful of individuals in a few

Table 2. Poverty Population of Regions and Nonmetropolitan and Metropolitan Areas: 1959, 1978, 1983

Area	Number of poor (in 1,000s) 1959	1978	1983	Poverty rate (percent) 1959	1978	1983
Total	38,766	24,497	35,266	22.0	11.4	15.2
Regions						
South	19,116	10,255	13,484	35.4	14.7	17.2
Outside the South	19,650	14,242	21,782	16.0	9.8	14.2
Northeast	—	5,050	6,561	—	10.4	13.4
North Central	—	5,192	5,536	—	9.1	14.6
West	—	4,000	6,684	—	10.0	14.7
Nonmetropolitan and Metropolitan Areas						
Nonmetropolitan areas	21,747	9,407	13,516	33.2	13.5	18.3
Metropolitan areas	17,019	15,090	21,750	15.3	10.4	13.8
Central cities	10,437	9,285	12,872	18.3	15.4	19.8
Suburbs[a]	6,582	5,805	8,878	12.2	6.8	9.6

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 4, and "Characteristics of the Population Below the Poverty Level: 1983," Table 4.

[a] Data for portion of metropolitan areas that is outside central cities.

pockets of poverty as some would have us believe. The 35 million people below the poverty line in 1983 exceeded the entire population of all but 23 countries in that year, including such major nations as Argentina, Austria, Canada, Sweden, and Taiwan. A population this large is bound to be diverse. However, a look at the demographics of the poor—residence, age, sex, race, family status—shows that some groups are more likely to be poor than others, although poverty increased in almost all groups between 1978 and 1983.

Region

In 1959 the South contained 49 percent of the nation's poor people (19 million of the 39 million total) and its poverty rate (35.4 percent) was more than double that of the rest of the nation (16.0 percent), as shown in Table 2. By 1983 the South's share of poor people was down to 38.2 percent and its poverty rate (17.2 percent), though still highest of all four Census Bureau-defined regions of the country, was just three percentage points above the average outside the South (14.2 percent).

However, poverty rates had increased even in the booming Sunbelt states of the South and West between 1978 and 1983, although, as might be expected, the rises were sharpest in the "smokestack" states of the North Central region (Michigan, Ohio, Illinois, etc.) and Northeast (Pennsylvania, New Jersey, New York, etc.).

Central cities, suburbs, nonmetropolitan areas

As in 1959, the poverty rate of 1983 was higher in nonmetropolitan areas (18.3 percent) than in metropolitan areas (13.8 percent). But the rate was still higher in the central cities of metropolitan areas—19.8 percent (Table 2). Central city residents are twice as likely to be poor as suburban dwellers (9.6 percent). But between 1978 and 1983, the poverty rate increased more in the suburbs (41 percent) than in either central cities (29 percent) or nonmetropolitan areas (37 percent). Today, about one of every four poor persons in the nation lives in the suburbs.

Table 3. Poverty Rate in the 20 Largest Standard Metropolitan Statistical Areas: 1978 and 1983

Standard Metropolitan Statistical Area	Poverty rate (percent) 1978	Poverty rate (percent) 1983
1. New York	13.6	17.1
Central city	18.7	23.4
2. Los Angeles-Long Beach	10.9	18.5
Central cities	12.4	21.4
3. Chicago	9.7	14.4
Central city	18.4	27.2
4. Philadelphia	11.2	13.9
Central city	19.8	24.8
5. Detroit	6.6	16.6
Central city	12.1	36.4
6. San Francisco-Oakland	7.6	7.6
7. Washington, D.C.	6.1	7.3
8. Boston	11.9	7.8
9. Pittsburgh	5.6	13.8
10. St. Louis	9.2	15.8
11. Baltimore	10.2	10.9
12. Cleveland	5.7	11.5
13. Houston	11.9	10.3
14. Newark	11.7	13.9
15. Minneapolis-St. Paul	6.1	9.0
16. Dallas	6.8	10.6
17. Seattle-Everett	6.7	10.5
18. Anaheim-Santa Ana-Garden Grove, Calif.	5.4	8.9
19. Milwaukee	6.0	10.8
20. Atlanta	12.3	16.3

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 10, and "Characteristics of the Population Below the Poverty Level: 1983," Table 10.

The poverty rate of central cities was actually higher in 1983 than in 1959—19.8 versus 18.3 percent. This reflects not only a growing number of poor in central cities but also a large exodus of the middle class and well-to-do. In the early 1980s, central cities were experiencing net outmigration of over 2 million a year as many people with the means to move did so. Those left behind in often deteriorating neighborhoods are frequently the disadvantaged—the elderly and minority groups.

Central city residents appear worst off in the largest metropolitan areas. In 1983 poverty rates in the central cities of the five largest standard metropolitan statistical areas (SMSAs) were all higher than the national average of 19.8 percent for central cities (see Table 3).

Between 1978 and 1983, poverty rates increased in 17 of the 20 largest SMSAs, declined in only two (Boston and Houston), and remained unchanged in one (San Francisco–Oakland). In the hard-hit industrial SMSAs of the North—Detroit, Pittsburgh, and Cleveland—the poverty rate more than doubled in these five years, and in the central city of the Detroit SMSA, it tripled.

While many people associate poverty with central city ghettos, only about 14 percent of the nation's poor lived in Census Bureau-defined poverty areas of central cities in 1983 and within central cities, more poor people lived outside poverty areas (7.9 million) than in them (5 million). (A poverty area is one with more than 20 percent of the population in poverty.) Poverty is increasing more rapidly outside poverty areas than inside. The number of central-city poor people outside poverty areas went up 52.0 percent from 1978 to 1983, compared to 33.2 percent inside these areas.

Age differences

Changes in poverty rates by age over the past quarter century are a good news-bad news story: good news if you were old; bad news if you were young.

Social welfare programs have been most successful in reducing poverty among the elderly aged 65 and over, for whom the poverty rate plunged from 35.2 percent in 1959 to just 14.1 percent in 1983 (see Table 4). Most of this decline has been achieved through government support programs, notably Social Security retirement payments, started in the 1930s and, unlike payments under Aid to Families with Dependent Children (AFDC), indexed to rise with inflation, and Medicare. As Budget Director David Stockman testified to Congress in 1984, without government transfers, 55.1 percent of the elderly would have been poor in 1983, four times the actual 14.1 per-

Table 4. Number of Poor and Poverty Rate, by Age, Sex, Race and Spanish Origin, and Family Status: 1959, 1978, 1983

	Number of poor (in 1,000s)			Poverty rate (percent)		
Characteristics	1959	1978	1983	1959	1978	1983
Total	39,490	24,497	35,266	22.4	11.4	15.2
Age						
Under 18	17,208	9,931	13,807	26.9	15.9	22.2
18-64	16,801	11,333	17,748	17.4	8.7	12.4
65 and over	5,481	3,233	3,711	35.2	13.9	14.1
Race and Spanish origin						
White	28,484	16,259	23,974	18.1	8.7	12.1
Black	9,927	7,625	9,885	55.1	30.6	35.7
Spanish origin[a]	—	2,607	4,249	—	21.6	28.4
Sex						
Males	—	10,017	15,182	—	9.6	13.5
Females	—	14,480	20,084	—	13.0	16.8
Family status						
In families	34,562	19,062	28,434[b]	20.8	10.0	14.1
In male-headed families	27,548	9,793	15,940	18.2	5.9	9.3
In female-headed families	7,014	9,269	12,494	49.4	35.6	40.5
Unrelated individuals[c]	4,928	5,435	6,832	46.1	22.1	23.4

Sources: Bureau of the Census, 1959 and 1978: "Characteristics of the Population Below the Poverty Level: 1978," Tables 1 and 11; 1983: "Characteristics of the Population Below the Poverty Level: 1983," Tables 1 and 11.

[a] Persons of Spanish origin may be of any race.

[b] The 1983 family data have been adjusted to include 630,000 persons living in "unrelated sub-families" below the poverty line who are not included in these categories in the published Census Bureau report on poverty for 1983.

[c] Unrelated individuals are persons not living with persons related to themselves by blood or marriage.

cent.[24] With inflation-proof Social Security, the poverty rate of the elderly had increased only minimally from 13.9 percent in 1978. Even with the remarkable reduction in their poverty rate since 1959, however, there were still 3.7 million elderly people with incomes below the poverty line in 1983 and another 2.2 million with incomes between 100 and 125 percent of the poverty threshold.[25]

Programs to assist children have not been nearly so widespread or generous. The poverty rate for children under 18 went from 26.9 percent in 1959 to a low 13.8 percent in 1969 and then climbed to 15.9 percent in 1978 and on up to 22.2 percent in 1983, when it was a full seven percentage points above the average rate for all ages. The increased proportion of children living in poverty is linked to the growth in female-headed households. In 1959, 24 percent of poor children lived in female-headed families. By 1983 the figure was up to 49 percent. However, the sharp rise in the poverty rate for children between 1978 and 1983 had less to do with the growth of female-headed families than with rising unemployment and declining family income. Only a quarter of the 4 million children under 18 added to the poverty population in those five years lived in female-headed households.

Another reason for the rise in poverty among children was the decline in benefits from AFDC, the principal program to assist poor single-parent families with children. Between 1976 and 1982, the

Government assistance programs have been most successful in reducing poverty among the elderly.

average monthly federal payment per recipient family, measured in 1982 dollars, dropped from $400 to $303.[26]

American society has clearly changed in terms of responsibility for dependents. Fifty years ago, family members in the working ages were expected to take care of both children too young to work and parents too old to work. Now there is substantial government assistance available for the elderly, but children can qualify for meager public assistance only when their parents are destitute.

Poverty among the working-age population (18-64) was halved from 17.4 to 8.7 percent between 1959 and 1978, but rose as steeply as the rate for children in the next five years, to 12.4 percent in 1983. Due largely to total population growth, there are now more working-age poor than there were in 1959. But people this age are still less likely to be poor than either children under 18 or the elderly over 65.

Male/female differences

The balance between males and females in the poverty population has changed less than one might suppose, given the popular impression of the "feminization of poverty," evoked by the growth in poor female-headed families. The female share of the overall poverty population was the same in 1983 as it was in 1966 (the earliest available data)—57 percent.

Since children in poverty are split evenly among boys and girls, the proportion of adults in poverty who are women is somewhat higher. Sixty-two percent of the poor aged 21 and over in 1983 were women and this too was the same as in 1966.

One obvious reason for the higher proportion of adult women in poverty is the growth of families headed by a woman, almost always without a husband present. Because of the lower wages received by women and because many separated and divorced mothers fail to receive child support, these families are much more likely than two-parent families to have incomes that put them below the poverty level.

Another reason is that women outlive men and the numbers of women in poverty are inflated by the large number of widows with meager incomes. Of the 4.2 million poor women in 1983 who were "unrelated individuals" not living in families, 1.9 million were 65 or older.[27] Among unrelated individuals the poverty rate is higher for women than men at age 65 and over, but very similar at younger ages. At ages 25-34 in 1983, for example, the rate was 15.3 percent for males and 15.0 percent for females.[28]

Although the female share of the adult poverty population in 1983, 62 percent, was the same as in 1966, it had been 66 percent in 1978. Fewer women than men slipped into poverty between 1978 and 1983. This could have been partly because adult women are less dependent than men on earnings from wages, so they were less affected by the recessions in these five years. In 1982, 84 percent of the income for men came from wages and salaries, compared to 76 percent for women.

Even though poverty has been increasing faster for men than for women since 1978, females are still more likely than males to be poor. In 1983 the overall poverty rate for females was 16.8 percent compared to 13.5 percent for males (Table 4).

Poverty among blacks

Discussions of poverty and welfare are typically laced with racial overtones. This is partly a legacy of the Great Society era of the 1960s when the War on Poverty and the civil rights movement arose simultaneously and issues of poverty and racial equality were often intermingled. Also, an obvious reason is that over one-third of the black population is poor and the poverty rate of blacks is three times that of whites—35.7 versus 12.1 percent in 1983 (Table 4). In 1983 the 9.9 million blacks with incomes below the poverty line comprised 28 percent of the poor, although blacks as a whole accounted for only 12 percent of the nation's total population.

The poverty status of blacks relative to whites has not changed at all over the past quarter of a century; in 1959, as in 1983, blacks were three times more likely than whites to be poor. Furthermore, like poverty rates in general, the rate for blacks has been moving upward in recent years. That rate reached its lowest point, 30.3 percent, in 1974, hovered around 31 percent until 1978, and then climbed to 35.7 percent in 1983. Between 1978 and 1983, the rise in the poverty rate was actually less for blacks than for whites—17 versus 39 percent.

Discouraging as it is, the 35.7 percent poverty rate for blacks is still a marked improvement over 1959 when over half (55.1 percent) of the black population was officially poor and almost two-thirds (65.6 percent) of all black children under age 18 were living in poverty families. In 1983, 45.2 percent of black children were living in poverty families. This was still in stark contrast to the figure for white children—17 percent.

Regional shifts illuminate the trend in black poverty. The South's economic gains in recent years could be expected to benefit blacks disproportionately since 53 percent of American blacks still reside in this region. In 1959 the poverty rate among blacks in the South (68.5 percent) was twice the rate for blacks outside the South (34.3 percent). (See Table 5.) By 1970 both rates had dropped substantially but the gap between them remained the same. In the early 1970s, poverty among blacks in the South fell further and rose only from 34.1 to 37.5 percent between 1978 and 1983. Outside the South, however, the black poverty rate soared from 19.1 percent in 1970 to 33.8 percent in 1983. This trend suggests that poverty rates for blacks inside and outside the South will soon converge.

These regional changes are obviously related to the decline in heavy industry in the North, particularly in the North Central region (the Midwest), which had provided the jobs that boosted large numbers of blacks into the middle class after World War II, in contrast to the recent economic growth of the South. The fact that the majority of blacks live in the South both helps keep the overall black

Table 5. Poverty Rates of Blacks, by Region: 1959, 1970, 1978, 1980, 1983

	Poverty rate (percent)				
Region	1959	1970	1978	1980	1983
South	68.5	42.6	34.1	35.1	37.5
Outside the South	34.3	19.1	26.7	29.6	33.8
Northeast	—	20.0	29.1	30.7	32.5
North Central	—	25.7	24.8	33.3	39.2
West	—	20.4	26.1	19.0	25.6

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 1, "Characteristics of the Population Below the Poverty Level: 1980," *Current Population Reports*, Series P-60, No. 133, 1982, Table 1, and "Characteristics of the Population Below the Poverty Level: 1983," Table 1.

poverty rate high—because the black poverty rate is still highest in the South—and has dampened the recent national increase in black poverty—because the rise has been much less in the South than elsewhere.

Changes in poverty among blacks have also been closely linked to the increase in female-headed households among blacks, as noted later.

Table 4 shows that the poverty rate for the Spanish-origin population in 1983 (28.4 percent) was lower than that of blacks (35.7 percent), but still well over twice that of the white population as a whole (12.1 percent). This rate too had gone up markedly from 1978 when it was 21.6 percent.

Poverty by family status

Persons living in families are generally much less likely to be poor than "unrelated individuals" not living in families; in 1983 the poverty rates for these two groups were 14.1 percent and 23.4 percent, respectively (Table 4). But this is not the case if the family is headed by a woman. In 1983, 40.5 percent of people in female-headed families were poor—more than four times the 9.3 percent for male-headed families. This clearly reflects the fact that men earn substantially more than women, on average, so that households with male earners are much less likely to fall below the poverty line.

The 1983 poverty rate of 40.5 percent for people in female-headed families was down less than one-fifth from the rate of 49.4 percent in 1959, while the rate for male-headed families had been cut in half, from 18.2 to 9.3 percent. During this quarter century, the poverty rate for male-headed families was much more responsive to economic swings, falling faster than the rate for female-headed families during the boom times of the 1960s and early 1970s and rising much more rapidly during the economic downturn from 1978 to 1983.

Female-headed families with income below the poverty threshold doubled from 1.9 to 3.8 million between 1959 and 1983. By 1983, 48 percent of families in poverty were headed by a woman, although female-headed families made up only about 14 percent of all families.

In sum, the swings in poverty over the past 25 years have been widespread, with the number of poor and the poverty rates for various demographic groups all falling between 1959 and the early to mid-1970s and then increasing between 1978 and 1983. The recent trend is clear and pervasive; regardless of region, age, sex, race, or family status, poverty has increased since 1978. The situation has deteriorated most for those who depend on earnings for income. Hopefully, this upturn in poverty will be reversed by the resurgence of the economy in 1984.

These changes give a clue as to the relative merits of Murray's and Harrington's viewpoints. If antipoverty programs fueled the increase, as Murray's view would have it, the recent increase might be expected to be more evident among groups prone to rely on welfare. Instead, the increase has been more rapid among those least likely to be welfare recipients.

Movements in and out of Poverty

A major drawback of yearly poverty statistics derived from the Current Population Survey is the inability to follow the movement of individual families and people into and out of poverty. Because these statistics, based on a cross-section of households, show relatively little annual change in the numbers and demographic characteristics of the poverty population, it is easy to take them as representing the same people each year. This perception is reinforced by writings on the "culture of poverty" and "underclass" which portray the poor as a permanent, well-defined group in American society. However, recent research indicates that this is far from the case. Most of this research is based on the University of Michigan Panel Study of Income Dynamics (PSID) which, as noted, has followed the economic fortunes of 5,000 representative families each year since 1968. Research so far, based primarily on the first ten years of PSID data, may not capture the "new poverty" of the 1980s, but this is the best information now available on the "dynamics" of poverty.

Persistence of poverty

The popular notion of a persistently poor underclass has been fostered by studies of the 1960s such as anthropologist Oscar Lewis' graphic picture of welfare dependency and poverty passed on from generation to generation, sociologist Elliot Liebow's portrayal of black streetcorner society in Washington, D.C., and urbanologist Gerald Suttles' description of a slum neighborhood in Chicago, along with journalist Ken Auletta's recent report on groups typically seen as part of an underclass—ex-prisoners, long-term welfare mothers, problem youth, and drug addicts.[29] PSID studies, however, indicate that only a portion of people deemed poor in a year's official statistics could be called persistently poor or part of a culture of poverty, although poverty touches the lives of a substantial proportion of Americans over a ten-year period.

In an early study of the persistence of poverty using PSID data, economist Frank Levy estimated that there were 10.6 million "permanently" poor people in the U.S. during the years 1967 through 1973.[30] This was less than half the official poverty numbers of those years.

Summarizing research based on PSID data for 1969 through 1978, Greg Duncan reported that only 6.8 percent of the family members had incomes below the poverty line in 1978, but nearly a quarter (24.4 percent) had fallen below the line in at least one of the ten years from 1969 to 1978.[31] Just 2.6 percent were "persistently" poor—defined as poor for eight or more years—and a minimal 0.7 percent were poor in all ten years. Using a slightly different approach with the PSID data, another researcher put the persistently poor at about 1 percent.[32]

The characteristics of the persistently poor were what might be expected of an "underclass": 62 percent were black and 61 percent were members of households headed by women.[33] This contrasts with 28 percent black and 35 percent in female-headed families in the nation's overall poverty population of 1983, according to Current Population Survey statistics.

Harvard researchers Mary Jo Bane and David Ellwood adjusted the PSID data to capture those who began a spell of poverty before the ten-year period and those still in a stretch of poverty at its close.[34] They concluded that most people who slip into poverty will remain poor only a year or two, but in any one year, the persistently poor—those poor for at least eight years at a stretch—make up 60 percent of the poverty population.

The PSID may not be appropriate for measuring the size of the "underclass," it is pointed out, because it covers only people living in families at the beginning of the study and trackable over ten years and could well miss the hard-core, homeless poor with no family ties. Also, since people living in families are less likely than others to be poor, the original PSID sample of 5,000 families may not have included as large a proportion of poor as found in the general population. The poverty rate derived from the PSID was in fact systematically a couple of percentage points below the official Census Bureau annual figures during the early 1970s. However, this could be because income has been better reported in the PSID interviews than in the Current Population Survey.[35]

When welfare dependency is used to measure persistent poverty, an Urban Institute study using PSID and other data found that fewer than 10 percent of mothers receiving AFDC welfare payments stayed on welfare for ten consecutive years.[36] These long-term welfare dependents had less education than

Table 6. Reasons for Beginning a Spell of Poverty

(Based on 1969-78 data from University of Michigan Panel Study of Income Dynamics)

Reasons for movements of panel family members into poverty	Percent of total movements in a year
Earnings of family head fell	36.8
Earnings of wife fell	6.5
Earnings of other family members fell	6.9
Family unearned income fell	6.2
Needs/poverty level rose	6.0
Child became head or wife in another family	15.6
Wife became female head of family	4.8
Child of male-headed family became child of female-headed family	6.5
Child was born into poverty family	10.5

Source: Mary Jo Bane, "Household Composition and Poverty," paper presented at the conference on "Poverty and Policy: Retrospect and Prospects," Institute for Research on Poverty and U.S. Department of Health and Human Services, Williamsburg, VA, December 6-8, 1984, Table 5.

other AFDC mothers and were more likely to be black, live in the North, have five or more children, be never married, and raised in a single-parent family. These are characteristics usually associated with an underclass, although a study based on AFDC mothers and their children cannot tell us much about the 35 percent of poor adults who are males or the two-thirds of poor families who do not receive AFDC.

Entering and leaving poverty

To judge from the PSID, half (50.2 percent) of people who become poor in a year do so because of a job loss or pay cut which reduces the family earnings (see Table 6). This far outweighs reasons related to changes in family composition—a child strikes out on his/her own ("child became head or wife in another family," 15.6 percent) or the family became female-headed (11.3 percent)—or a loss of cash welfare payments, which would show up in a drop in unearned income (6.2 percent).

On the opposite side of the coin, obtaining a job or pay raise is by far the most likely path out of poverty, particularly for men and people in households headed by men. Overall, increased earnings account for 80.3 percent of moves out of poverty, according to PSID data: 92.2 percent for people in male-headed families and 55.7 percent for people in female-headed families.[37] Only 4.6 percent of people leaving poverty do so as a result of their own or a parent's marriage or remarriage, although the figure is over a quarter (26.9 percent) for people in female-headed households.

Intergenerational welfare dependency

Are women who grow up in AFDC families likely to become welfare mothers themselves? This has become an important policy issue as the number of children being raised in poor female-headed families has grown.

Again using PSID data, Levy found that among women eligible for AFDC in 1976, those who were children in AFDC families in 1968 were 1.4 times more likely to be AFDC mothers themselves in 1976 than women who had been children in families not receiving AFDC in 1968.[38] Some of this relationship may be due to other characteristics likely to be passed from generation to generation, such as low educational attainment. Controlling for a host of demographic and socioeconomic factors, Levy found that among white women eligible for AFDC in 1976, 11 percent of those from families receiving AFDC in 1968 were receiving AFDC themselves in 1976, compared to 7 percent of women from families not receiving AFDC in 1968. For black women eligible for AFDC, coming from a welfare family increased the proportion on welfare from 25 to 36 percent.

However, University of Michigan researchers Martha Hill and Michael Ponza found much less evidence of welfare dependency being passed on from one generation to the next when they looked at a sample of people who had been children in PSID families in 1968 and had set up their own households by 1981.[39] They concluded: "In general, welfare receipt by parents does not encourage welfare receipt by offspring. However, apparently at high levels of receipt there is some welfare dependency among whites."

Poverty, Work, and Sources of Income

Is poverty increasing because poor able-bodied people of working age refuse to work if they can rely on government assistance? This is the thrust of Murray's argument, but the evidence suggests otherwise.

Work experience

Again contrary to popular impressions, most poor people of working age are working or looking for work. In March 1984 there were 14.9 million men and women aged 22-64 whose 1983 incomes put them below the poverty line, according to the Current Population Survey. Of these, 7.3 million, 49 percent, reported that they had worked in 1983, and another 1.5 million, 10 percent, said they did not work in 1983 because they were unable to find work (see Table 7, page 24).

Of the 7.6 million poor people this age who did not work—in addition to those who tried but could not find a job—44.4 percent (3.4 million) were keeping house (this was the reason given by 62 percent of the 5.4 million poor women this age who did not work in 1983); 22.7 percent (1.7 million) were ill or disabled; 5.6 percent (425,000) were going to school; 4.4 percent (337,000) were retired; and 3.7 percent (280,000) gave some other reason for not working. Of the 7.9 million families in poverty in 1983, 61 percent had at least one worker and 21 percent had two or more workers.[40]

These figures certainly do not indicate that work incentives have disappeared. On the contrary, it seems that most poor adults of working age who are not caring for children, going to school, or disabled are trying to work their way out of poverty.

While it is perplexing that a large share of people in poverty are poor even though they work or live in a family which has one or more workers, it should be noted that of the 7.3 million poor adults aged 22-64 who reported working in 1983, only 1.9 million (26 percent) had worked full-time, the year round (50-52 weeks). Most worked at part-time or temporary jobs. The most common reason for working less than 50 weeks in 1983 was the inability to find a job.

It is also important to recognize that a person working 40 hours a week for 52 weeks at the minimum wage of $3.35 per hour (in 1983 as in 1985) would earn only $6,968, less than the poverty line of $7,938 for a family of three in 1983. Two adults working full-time, year-round at the minimum wage would earn $13,936, which would put a family of four above the 1983 poverty line of $10,178 for a family of four, but taxes and child-care costs would consume much of the additional income. Child-care costs would also loom large for female-headed families, who made up 3.1 million, or 54 percent, of the 5.8 million poor families with children under 18 in 1983. These female-headed families typically have only one worker, if any.

The situation has become dramatically worse for those trying to work their way out of poverty. In 1978, the year the recent poverty increase began, 4.5 million poor adults aged 22-64 worked (Table 7). By 1983 the number had grown to 7.3 million. At the same time, however, the number of poor adults aged 22-64 who did not work because they could not find jobs grew from 316,000 to 1.5 million (an increase of 364 percent), and of those who did work, the number unemployed 27 or more weeks increased by 838,000 (up 249 percent), and those who worked full-time for 50-52 weeks but were still poor increased by 776,000 (67 percent).

All these figures suggest that many of the people added to the poverty population from 1978 to 1983 did not become poor because they or their parents refused to work, as Murray would imply. Among adults of working age, a large

Table 7. Work Experience of the Poor Aged 22-64: 1978 and 1983

Work experience	Number of poor aged 22-64 (in 1,000s)		Increase/decrease 1978 to 1983	
	1978	1983	Number (in 1,000s)	Percent
Total	9,297	14,941	5,645	60.1
Worked during year	4,520	7,289	2,768	61.2
Worked full-time	3,109	4,637	1,528	49.1
50-52 weeks	1,159	1,935	776	67.0
26 weeks or less	1,278	1,788	510	39.9
Worked part-time	1,411	2,652	1,241	88.0
50-52 weeks	403	751	348	86.4
26 weeks or less	671	1,380	709	105.7
Worked less than 50 weeks because:				
ill or disabled	344	313	−31	−9.3
keeping house	930	820	−110	−11.9
unable to find work	915	2,331	1,416	154.6
other	768	1,137	369	48.0
Number of weeks unemployed				
1 to 4 weeks	260	326	66	25.4
5 to 14 weeks	434	629	195	44.9
15 to 26 weeks	346	755	411	118.5
27 or more weeks	337	1,175	838	249.0
Did not work in year	4,744	7,627	2,883	60.8
Reason for not working:				
ill or disabled	1,454	1,734	280	19.3
keeping house	2,293	3,385	1,092	47.6
going to school	216	425	209	96.8
unable to find work	316	1,467	1,151	364.2
retired	177	337	160	89.8
other	288	280	−8	−2.8
In armed forces	32	26	−6	−18.8

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 14, and "Characteristics of the Population Below the Poverty Level: 1983," Table 14.

share of the new poor are in poverty because they cannot find jobs, can find only temporary or part-time work, or work full-time all year but still cannot earn enough to move out of poverty. The proportion of people poor for these reasons increased between 1978 and 1983.

Linked to the increase in poverty among those who worked full-time, year-round is a decline in real income. The Bureau of Labor Statistics reports a drop in real weekly earnings of 10 percent between 1978 and 1983.[41] Also, Census Bureau figures show a drop in real median family income from $26,939 in 1978 to $24,580 in 1983, a decline of 9 percent (see Figure 3, page 11). Between 1982 and 1983, real median family income increased for the first time since 1978, and the increase in the poverty rate—from 15.0 to 15.2 percent—was less than any other year-to-year increase since 1978.

Table 8. Sources of Reported Income of Poor Families: 1978 and 1983

	1978		1983	
Type of income	Number of families with income of this type (in 1,000s)	Percent of total income of poor families	Number of families with income of this type (in 1,000s)	Percent of total income of poor families
Total	5,280	100.0	7,641	100.0
Earnings	3,153	41.3	4,557	46.6
Other	4,145	58.7	6,057	43.4
Social Security	1,206	16.9	1,437	13.6
Public assistance[a]	2,073	28.4	2,679	23.2
Supplemental Security Income[b]	493	4.1	576	3.5
Other transfer payments[c]	445	3.3	1,134	6.2
Dividends, interest, and rent	905	1.4	1,769	1.7
Other[d]	611	4.7	1,140	5.2

Sources: Bureau of the Census, "Characteristics of the Population Below the Poverty Level: 1978," Table 38, and "Characteristics of the Population Below the Poverty Level: 1983," Table 34.

[a] Aid to Families with Dependent Children and General Assistance.

[b] For the needy aged, blind, and disabled.

[c] Unemployment insurance, workman's compensation, and veterans' payments.

[d] Includes pensions, alimony, child support, annuities, etc.

Sources of reported income

Statistics on the sources of income poor families report in the Current Population Survey also do not support Murray's charge that public assistance undermines the incentive to earn income.

In 1983, 60 percent of poor families (4.6 million of a total of 7.6 million poor families) reported income from job earnings. This was the same proportion as in 1978 (3.2 million of a total of 5.3 million). (See Table 8.) However, the proportion of total family income accounted for by earnings increased from 41.3 percent in 1978 to 46.6 percent in 1983. At the same time, the share of family income derived from public assistance—mainly AFDC, the chief cash benefit program for poor families headed by able-bodied persons under 65—fell from 28.4 percent to less than a quarter (23.2 percent).

This trend reflects the fact that an increasing share of the poor are marginal workers and their families, often male-headed families not eligible for AFDC. Workers in these households are able to find low-paying, part-time jobs from time to time, but not the kind of secure job that could lift their families out of poverty. As the economy faltered, their situation worsened.

Government Assistance Programs and the Poor

There is little doubt that the American public is frustrated and upset with the image of soaring social welfare costs *and* growing poverty. Much of this frustration, however, stems from a misperception of what programs are behind the escalating government expenditures, a misunderstanding about who is receiving government assistance, and an exaggerated notion of the amount of assistance going to the typical person in poverty. Most government benefits go to the middle class, the value of benefits going to the poor has fallen in recent years, and these benefits were not large to begin with.

Federal government benefits that go directly to families or individuals are sorted into three classes, as shown in the box: (1) social insurance (Social Security retirement and disability benefits, and unemployment insurance) which is not means-tested and goes primarily to the middle class; (2) means-tested cash assistance (Aid to Families with Dependent Children and Supplemental Security Income) which goes mostly to the poor; and (3) noncash assistance, which is both means-tested (Medicaid, food stamps, subsidized housing, free or reduced-price school lunches) and non-means-tested (Medicare for the elderly and subsidized lunches for all students in participating schools).

Social insurance is typically viewed somewhat differently from means-tested assistance. Many people receiving payments from social insurance programs, such as Social Security retirement and unemployment insurance, feel they are simply getting back the money they put into these programs, while those receiving benefits from means-tested programs are "getting something for nothing." This distinction becomes somewhat fuzzy, however, when it is recognized that many recipients of social insurance receive back far more than they put in and that the working poor who pay federal income tax are contributing toward their own welfare benefits.

U.S. Federal Government Assistance Programs: Fiscal Year 1984

Government programs which provide benefits to families or individuals are divided into three categories: (1) social insurance, (2) means-tested cash assistance, (3) noncash benefits. The first two comprise what are called "transfer payments."

Social insurance benefits are entitlements, not means-tested, and go primarily to the middle class. Means-tested cash assistance goes primarily to the poor. Noncash benefits are split between non-means-tested benefits, which go primarily to the middle class, and means-tested benefits, which go both to the poor and near-poor, e.g., reduced-price school lunches for students from homes with incomes within 125 and 195 percent of the poverty line.

In addition, some federal programs provide funds not directly to individuals but to state and local governments to run programs to assist the poor and disadvantaged. Many War on Poverty programs were of this type, for example: Legal Aid, which provides free or subsidized legal services for poor people; the Community Services Administration, which funded local Community Action Agencies to help organize low-income communities; Headstart, which provides preschool training for disadvantaged children.

Programs marked with an asterisk (*) on the list below are the major programs from the War on Poverty.

The "costs" and "expenditures" shown for the programs listed are *federal* expenditures in fiscal year 1984 (October 1, 1983, through September 30, 1984). They do not include state and local expenditures. State and sometimes county and local governments pay part of the costs of Aid to Families with Dependent Children, Unemployment Insurance, Medicaid, subsidized school lunches and housing, and the employment and social services programs listed. Federal funds cover the full costs of Social Security retirement and disability payments, Supplemental Security Income, Medicare, and food stamps.

The programs listed accounted for $332.2 billion, or 77 percent, of federal expenditures of $432.0 billion on human resources in fiscal year 1984. Human resources in turn accounted for 50.7 percent of total federal expenditures in fiscal year 1984.

Social Insurance

Non-means-tested

Social Security Retirement (Old-Age and Survivors Insurance)

Established by the Social Security Act of 1935, subsequently amended several times to expand coverage. In 1972, benefits were indexed to rise with inflation. Provides cash payments to retired workers and their dependents and to survivors of insured workers.

Cost: $162.4 billion. **Recipients:** 32.4 million individuals.
Payments: Average annual expenditure, $5,005 per individual.

Social Security Disability Insurance

Cash payments for disabled workers aged 50 and over are provided by the Social Security Act amendment of 1956; payments for dependents of disabled workers 50 and over by the 1958 amendment; and payments for disabled workers under 50 by the 1960 amendment.

Cost: $18.5 billion. **Recipients:** 3.8 million individuals.
Payments: Average annual expenditure, $4,824 per individual.

Unemployment Insurance

A federal-state program established by the Social Security Act of 1935. Provides partial wage-replacement payments to covered workers who lose their jobs involuntarily. Payments normally last 26 weeks but are often extended 13 weeks during recessions. Figures below refer only to regular payments up to 26 weeks.

Cost: $18.3 billion. **Recipients:** 2.2 million individuals.
Payments: Average weekly expenditure, $119 per individual.

Means-Tested Cash Assistance

Aid to Families with Dependent Children

A federal-state program established by the Social Security Act of 1935. Program eligibility and payments were expanded during the 1960s, then reduced in 1981. Provides cash payments to "needy" families, with need defined by each state. In all states, eligible families are those with children under 18 where one parent is absent owing to death, desertion, divorce, incapacitation, or incarceration. In addition, 26 states aid two-parent families with the father out of work.

Cost: $8.3 billion. **Recipients:** 10.9 million individuals.
Payments: Average annual expenditure, $3,852 per family.

Supplemental Security Income

Established by 1972 amendments to the Social Security Act. Provides monthly cash payments to needy aged, blind, and disabled persons.

Cost: $8.5 billion. **Recipients:** 3.6 million individuals.
Payments: Average annual expenditure, $2,355 per individual.

Noncash Benefits: Non-Means-Tested

Medicare*

Established by 1965 amendments to the Social Security Act. Covers most medical costs for individuals eligible for Social Security retirement and disability payments.

Cost: $62.7 billion. **Recipients:** 29.6 million individuals.
Benefits: Average annual expenditure: $2,126 per individual.

Subsidized School Lunch Program

The National School Lunch Act of 1946 subsidizes costs at participating schools to reduce lunch prices for all students.

Cost: $800,000. **Recipients:** 11.6 million students on average day.

(continued)

Noncash Benefits: Means-Tested

Medicaid*

Established by 1965 amendments to the Social Security Act. Covers most medical costs for individuals in AFDC families and most individuals eligible for Supplement Security Income payments.

Cost: $20.1 billion. **Recipients:** 21.9 million individuals.

Benefits: Average annual expenditure, $918 per individual.

Food Stamp Program*

Currently operating under the Food Stamp Act of 1977, the program began as a pilot program under President John Kennedy in the early 1960s and was greatly expanded in the late 1960s. Distributes coupons redeemable for food to individuals and families with incomes below 130 percent of the poverty line.

Cost: $11.6 billion. **Recipients:** 20.8 million individuals or families.

Benefits: Average value of coupons per recipient per month: $46.

Housing Assistance Programs

Subsidized housing is provided under several programs, the most important of which are Low-Rent Public Housing and rent supplements provided for under the Housing Act of 1937. Provides housing assistance to families with incomes below a certain percentage (usually 80 percent) of median income for the area.

Cost: $9.9 billion. **Recipients:** 10 million families.

Benefits: Average annual expenditure, $990 per household.

Free or Reduced-Price School Lunch Program

Also provided for under the National School Lunch Act of 1946. Provides free lunches for students from homes with income under 125 percent of the poverty line and reduced-price lunches for those from homes with incomes between 125 and 195 percent of the poverty line.

Cost: $2.6 billion. **Recipients:** 11.9 million students on average day.

Programs Providing Assistance Through State and Local Governments

Job Training and Job Creation

The Area Redevelopment Act and Manpower Development and Training Act of the early 1960s funded job training in low-income areas and provided assistance to displaced workers. The Comprehensive Employment and Training Act (CETA) of 1973 consolidated these programs under one administration, maintaining job-training programs and expanding public-sector employment. Under the Reagan administration, in 1983, CETA was replaced with the Jobs Partnership Training Act, which attempts to involve industry and government as equal partners in coordinated local efforts to provide jobs in the private sector for disadvantaged and displaced workers.

The Work Incentive Program helps AFDC mothers find jobs in the private sector and the Job Corps provides training for a small number of unemployed.

Cost: $2.6 billion for all federal training and employment services.

Education Programs*

The Elementary and Secondary Act (ESEA) of 1965 provided federal funds to elementary and secondary schools based on the proportion of poor students in the local school district. Chapter I of the Education Consolidation and Improvement Act of 1981 replaced ESEA and now distributes funds to support compensatory education for disadvantaged students.

Cost: $3.1 billion for compensatory education.

Title XX Social Service Programs

In 1974, Congress created Title XX of the Social Security Act to provide states with funds to support certain social services. In 1981, this was changed into the Social Services Block Grant which provides funds to states to be used at their discretion for such services as in-home help for the frail elderly and child care for working AFDC mothers.

Cost: $2.8 billion for Social Services Block Grant.

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*Program initiated with the War on Poverty in the mid- to late 1960s.

Federal Expenditures in Fiscal Year 1984

Programs	Dollars spent (in billions)	Programs	Dollars spent (in billions)
Social Insurance		**Means-Tested Noncash Benefits**	
Social Security Retirement	162.4	Medicaid	20.1
Social Security Disability Insurance	18.5	Food Stamps	11.6
Unemployment Insurance	18.3	Public and Subsidized Housing	9.9
Total	199.2	Free or Reduced-Price School Lunches	2.6[a]
Means-Tested Cash Assistance		Total	44.2
Aid to Families with Dependent Children	8.3	**Social programs that do not provide direct benefits to individuals**	
Supplemental Security Income	8.5	Employment and Job Training	2.6
Total	16.8	Compensatory Education Aid	3.1
Non-Means Tested Noncash Benefits		Social Services Block Grant	2.8
Medicare	62.7	Total	8.5
Regular School Lunches	0.8[a]		
Total	63.5		

Total for programs listed: $332.2 billion
Total federal expenditures on human resources: $432.0 billion

Sources: U.S. House of Representatives, Committee on Ways and Means, *Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means*, Committee Print No. 99-2, February 22, 1985, and Office of Management and Budget, Executive Office of the President, *Historical Table: Budget of the United States Government, Fiscal Year 1986*, February 1985.

[a] Author's estimates, based on Bureau of the Census data on noncash income and total federal outlays for school lunch program in fiscal year 1984.

Cash assistance

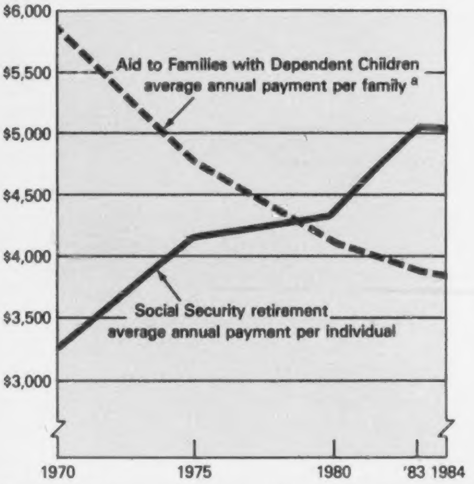
Social insurance programs account for the overwhelming majority of federal cash assistance expenditures and their share has been rising rapidly. In fiscal year 1984, Social Security retirement and disability insurance benefits together cost $181 billion (see above). Unemployment insurance accounted for another $18.3 billion, which alone was more than twice the $8.3 billion spent by the federal government on AFDC.

Female-headed families in poverty, often portrayed as a heavy drain on the government treasury, received an average of $3,368 in federal public assistance payments in 1983, which was about the same amount that these families reported in earnings during that year ($3,115).[42] In fiscal year 1984, AFDC accounted for only 2 percent of the $432 billion in federal outlays for human resources; Social Security for the retired elderly accounted for 38 percent. Interest on the national debt alone cost 13 times the federal expenditure on AFDC in fiscal year 1984—$111.0 billion versus $8.3 billion.

Harvard researchers David Ellwood and Lawrence Summers report that between 1970 and 1980 alone, expenditures on Social Security retirement for the overwhelmingly middle-class elderly rose from $66.8 to $107.6 billion (measured in constant 1980 dollars).[43] The middle class also profited most from the 1970s growth in federal expenditures for assistance to the nonelderly. "The really large growth in social programs for the nonelderly came in the social insurance programs—Unemployment Insurance, Workman's Compensation [covered

Figure 4. Aid to Families with Dependent Children and Social Security Retirement, Average Annual Payments per Recipient: 1970, 1975, 1983, 1984

(in constant 1984 dollars)



Source: U.S. House of Representatives, Committee on Ways and Means, *Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means*, Committee Print No. 99-2, February 22, 1985.

[a] Includes only the federal share of total AFDC payments.

largely by state funds], Social Security Disability, and Medicare for the disabled together cost $56 billion, up from $25 billion just a decade before."

As social insurance cash assistance has been rising, cash assistance to the poor has been falling. Between 1975 and 1984, the average annual payment per recipient in Social Security retirement benefits, which are indexed to rise with inflation, increased by 20 percent, from $4,162 to $5,005, in constant 1984 dollars (see Figure 4). Meanwhile, the average annual federal expenditure per family in the AFDC program, which is not indexed, *fell* by 20 percent, from $4,795 to $3,852, in 1984 dollars. Between 1972 and 1984, the combined value of food stamps and AFDC cash assistance received by the average recipient family fell by 22 percent in constant 1984 dollars, from $8,894 to $6,955.

It is hard to imagine how this drop in benefits would encourage people to move onto the welfare rolls. To do so has become harder in any case. With tightening of federal guidelines for eligibility in 1981, the overall number of persons on AFDC dropped from 11.2 million in 1981 to 10.9 million in 1984, a decrease of about 3 percent. However, welfare rolls in many states were pushed up by the "new poor" laid off during the 1981-83 recession, with states obliged to raise taxes to cover the extra costs from their own funds. In hard-hit Ohio, for example, the number of AFDC recipients grew by 18 percent from 1981 to 1984.[44] Many people forced off AFDC rolls by the new regulations wound up on relief, programs for the destitute available in 33 states that are paid for entirely by state and county funds. Ohio's costs for AFDC and General Relief combined rose 48 percent between 1981 and 1984, and the proportion of the bill paid by state funds grew from 55 to 64 percent. (Federal funds cover 50 to 65 percent of AFDC costs, with the proportion determined by a state's per capita income and how well the state program is run.)

Unfortunately, Charles Murray, although the subtitle of his book is "American Social Policy 1950-1980," essentially ends his study in the mid-1970s, before the decrease in welfare benefits was well under way. He makes much of the rise in welfare benefits in the 1960s, but ignores the decline in the 1970s, and, of course, misses the effects of stringent new AFDC eligibility rules and cuts in federal shares of welfare costs by the Reagan administration in 1981.

Noncash assistance

The middle class also wins out in federal noncash assistance. In fiscal year 1984, federal outlays for Medicare, which provides noncash health care benefits to the elderly, amounted to $62.7 billion, compared to $44.2 billion altogether for the four major noncash benefit programs aimed at the poor—Medicaid, food

Buying groceries with food stamps. Less than half of poverty households received food stamps in 1983.

stamps, public and subsidized rental housing, and free or reduced-price school lunches (see page 29).

In addition, a large share of benefits under these four means-tested programs goes to people who are not officially poor. Eligibility for means-tested programs is gauged by determining whether or not a potential recipient has sufficient means of support without government assistance. The eligibility cutoff for most means-tested noncash programs is set to include the near-poor, for example, income below 130 percent of the poverty threshold for food stamps. However, assets are also taken into account in determining "need," so that a family with a car or equity in a house might be ruled out even though its cash income falls below the poverty line. In 1983, only half (50.6 percent) of households receiving one or more means-tested noncash benefits were below poverty level.[45] While 72.2 percent of households receiving food stamps had incomes below the poverty line, the proportions were lower for the other three major means-tested noncash assistance programs: 60.8 percent for Medicaid; 52.4 percent for subsidized housing; and 52.8 percent for free or reduced-price school lunches.

The share of federal means-tested assistance programs that *does* go to the poor also leaves out a large proportion of families with incomes below the official poverty line. In 1983 only 35.1 percent of families with incomes below the poverty threshold received public assistance cash payments (mostly AFDC) and only 58.9 percent of officially poor households received benefits from one or more of the four major means-tested noncash assistance programs.[46] Close to two-thirds (64.5 percent) of poor households with children aged 5-18 received federal assistance through the school lunch program, but less than half (41.4 percent) of poverty households received food stamps, only 39.7 percent had one or more members covered by Medicaid, and just 22.5 percent received subsidized housing assistance.

These figures do not fit the popular picture of poverty households living comfortably off a basketful of government benefits. In fact, the proportions of poor households receiving means-tested benefits do not differ markedly from the proportions of all households receiving government benefits. In the first quarter of 1984, according to the Census Bureau's new Survey of Income and Program Participation, 47 percent of U.S. households received direct government benefits of some kind.[47] These included Social Security retirement and disability, Medicare, unemployment insurance and veterans' benefits, as well as means-tested benefits.

Female-headed Families and Poverty

Between 1959 and 1983, female-headed families in the U.S. grew from 4.3 million and 9.8 percent of all families to 10.4 million and 14.3 percent of all families.[48] Since these families are over four times more likely than male-headed families to be poor, this highly publicized trend looms large in the changing poverty picture of the past quarter century.

In 1960, 18 percent of people in poverty were living in female-headed households. By 1983, 12.5 million, or 35 percent, of the 35.3 million people deemed officially poor were living in households headed by women.[49]

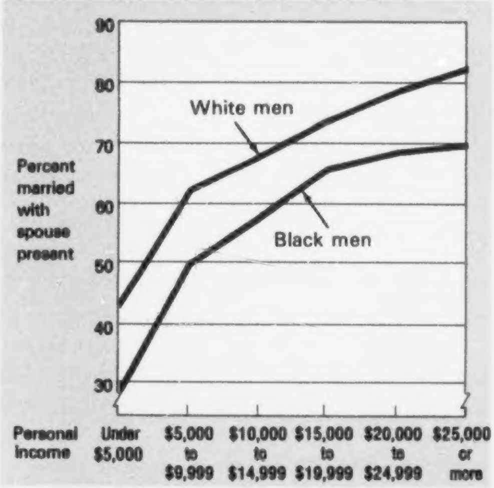
The increase in female-headed households has been particularly disastrous for the children in these households. In 1983 there were 13.8 million children under age 18 in households below the poverty level, and 49 percent of them (6.8 million) lived in female-headed households. The poverty rate for children in female-headed families was 55.4 percent compared to 13.4 percent for children in other types of families.

Among blacks these trends are even more striking. In both 1959 and 1983, the total number of poor blacks was about 9.9 million, but the number living in female-headed families rose from 2.9 million, 29.3 percent of the total, to 5.8 million, 53.8 percent of the total. In 1983 the poverty rate for blacks in female-headed families was 56.1 percent compared to 20.4 percent for blacks in male-headed families. Seventy-five percent of the 4.3 million black children in poverty in 1983 lived in female-headed families and the poverty rate for these children was 68.5 percent compared to 23.6 percent for black children in male-headed families.

Why the increase in female-headed families?

Demographically, the increase in female-headed families since 1960 is linked to the rising proportion of children born out of wedlock and the increase in divorce, although the divorce rate has leveled off since 1981. Black women are more likely than white women to have children out of wedlock; 57 percent of births to black women in 1982 were out of wedlock compared to 12 percent of white births.[50] Black women who separate from their husbands spend an average of seven years as separated wives before divorce or reconciliation, compared to an average of only about a year for white women. Also, black women are more likely to divorce and much less likely to remarry after a divorce than white women.[51] As a result, 42 percent of black families were female-headed in 1983, compared to 12 percent of white families.

Figure 5. Percent of Black and White Men Aged 25-64 Who Were Married, by Personal Income in 1983



Source: Bureau of the Census, "Money Income of Households, Families, and Persons in the United States: 1983," *Current Population Reports*, Series P-60, No. 146, 1985, Table 45.

University of Chicago sociologists William Julius Wilson and Kathryn Neckerman suggest that two divergent factors may be behind the growth in female-headed families: the growing economic independence of women and the relatively poor economic situation of black men.[52] Higher female labor force participation and occupational upgrading mean that women are no longer forced to remain in an unhappy marriage—an option not available to their mothers and grandmothers. Many black women, on the other hand, may leave a marriage or forego marriage altogether because of the shortage of black men with the ability to support a family.[53]

The relationship between income and marriage for men is clear; among both blacks and whites, men with higher incomes are more likely to be married than men with lower incomes. In 1983, only 30 percent of black men aged 25-64 with personal incomes below $5,000 in that year were married, compared to 70 percent of black men that age with incomes of $25,000 and over (see Figure 5). Part of this relationship may result from younger men making less money than older men and also being less likely to be married. Thus, a reason for the lower proportions of married black than white men at each income level may be that a larger share of the black population falls in the younger age groups.

In 1983 the median income of black men aged 15 and over ($8,967) was just 58 percent of the median for white men ($15,401).[54] Black men are also less likely than white men to be employed and far more likely to be unemployed. At the end of 1984, even though employment had picked up for blacks as well as whites during the year, the proportion of working-age black men with a job was 53 percent compared to 61 percent for white men, and the unemployment rate of black men was 13.1 percent versus 5.4 percent for white men.[55] A recent National Urban League report points out that the disadvantages of black women in the marriage market are also linked to black males' higher rates of mortality and incarceration.[56]

Is welfare to blame?

In general a woman and her children are eligible for AFDC only if she has no legal husband in the house. Twenty-six states and the District of Columbia participate in AFDC-UP, for which hard-strapped two-parent families are eligible if an out-of-work father who is the primary wage earner has exhausted his unemployment insurance, but such households made up only 10.2 percent of the national AFDC caseload in 1984.[57] Murray contends that these rules and seemingly livable welfare benefits (AFDC, Medicaid, and food stamps) encourage improvident young women and their partners, faced with an out-of-wedlock pregnancy or birth, to choose welfare for the woman and the child over marriage. (They can live together without jeopardizing the woman's eligibility for welfare and so long as the father is not legally responsible for the child, he can work when they need extra cash and his income will not count against her eligibility for welfare benefits.) Other conservative critics claim that welfare also encourages irresponsible husbands to desert their families or unhappy wives to rid themselves of unwanted husbands.

If welfare does indeed promote female-headed families, the proportion of such families could be expected to be relatively high in states with high AFDC payments and lower in states with low benefits, but the statistics show otherwise. In 1980, monthly AFDC payments—set by each state according to a complicated "needs" standard—were lowest for a family of four in Mississippi, $160, and highest at $563 in New York and California. But the proportion of families headed by females in Mississippi, 16.0 percent, was nearly as high as in New York, 17.9 percent, and higher than in California, 14.8 percent.

David Ellwood and Mary Jo Bane recently conducted a careful examination of such relationships and concluded: "There is no obvious relationship between the fraction of children not living in two-parent families and AFDC benefit levels across states."[58] They did find that higher benefits were slightly associated with higher rates of divorce and separation and in low-benefit states young single mothers receiving welfare were much more likely to live with parents than their counterparts in high-benefit states. But there was no correlation between levels of AFDC monthly checks and rates of out-of-wedlock childbearing. In general, then, it appears that welfare provides little incentive to create single-parent families.

This conclusion is reinforced by trends in female-headed families and AFDC caseloads. Between 1972 and 1983, while the number of children living in female-headed families continued to in-

Welfare does not seem to explain the rapid growth of poor female-headed families. Among blacks, the main reason may be the shortage of black men with the ability to support a family.

crease, the share of female-headed families with children under 18 actually receiving AFDC fell from 77 to 59 percent.[59]

Recent trends promise a slowing pace of growth in female-headed households. The divorce rate, after rising rapidly for two decades to a high of 5.3 per 1,000 population in 1981, inched down to 4.9 per 1,000 in 1984.[60] Fewer divorces now involve children; the average number of children per divorce decree fell from a high of 1.34 in the late 1960s to 0.94 in 1982.[61] Obviously divorces which do not involve children do not create single-parent families. And the increase in female-headed families, which averaged 304,000 a year in the 1970s, slowed to 225,000 a year from 1980 to 1983. From 1982 to 1983, only 66,000 new female-headed families were added, but this was probably due to the recession which discouraged family breakups.

The slowdown in the growth of female-headed families, coupled with the improving economy and employment situation in 1984, should help nudge the poverty rate for 1984 (to be published in the late summer of 1985) below 15 percent.

Poverty and Social Policy

Unfortunately the sight of poverty in the U.S. rising since 1978 in tandem with a continuing rise in federal outlays for social assistance has led many to believe that government social programs have not worked and billions of dollars have been wasted on useless antipoverty programs over the past 20 years. Even the most avid supporters of War on Poverty programs would probably admit (at least to themselves) that some programs have not measured up to the high hopes of their designers. But a host of recent, carefully documented reports reveals many successes.

For example, political scientist Edwin Cobb has related how a Community Action Agency improved conditions for the poor in southern Virginia.[62] Paul Starr documents the extent to which Medicaid and Medicare have lowered infant mortality, lengthened life expectancy, and improved the health of the poor, and food stamps and school lunch programs have reduced "nutritional inequality" between the poor and nonpoor.[63] Educator David Weikart found a record of increased employment, reduced welfare dependency, and lower rates of juvenile delinquency and teenage pregnancy among older adolescents who had participated in a Headstart preschool program.[64]

Most of the increased government spending on social welfare has been targeted toward the elderly and the dramatic decline in poverty among the elderly can be credited largely to Social Security and Medicare. Poverty among the nonelderly has not decreased because most programs initiated or expanded in the 1960s were not designed to provide income above the poverty line or stimulate economic independence and has recently increased because of deteriorating economic conditions.

Poverty and the Reagan administration

Perhaps the most widespread use of figures based on the poverty line is not for studying the poor or devising programs to ameliorate poverty but for political finger-pointing. With the possible exception of the unemployment rate, the poverty rate is the most widely used gauge of how Americans are doing. If the poverty rate goes up, public policy is blamed. If it does down, public policy gets much of the credit.

Many observers have noted that the recent increase in poverty coincided with cutbacks in assistance to the poor. In 1980, the year before the start of the first Reagan term, there were 29.1 million people below the poverty line; in 1983 the number was 35.3 million. Studies by the nonpartisan Congressional Budget Office, the Urban Institute, and the Center on Budget and Policy Priorities all show that the revised welfare rules and the budget and tax cuts of 1981-82 have resulted in less assistance for the poor.[65] Many blame these changes for the startling increase in poverty. In my view that conclusion is unwarranted.

What were these changes? The Center on Budget and Policy Priorities lists the major ones:[66]

- The food stamp program was cut by $2 billion a year from what it would have been. Benefits were terminated for nearly one million recipients and reduced for all others.
- Federal guidelines on circumstances under which AFDC benefits must be paid were narrowed in 1981.* As a result, according to the General Accounting Office, AFDC payments and Medicaid coverage were terminated for 500,000 low-income working families, and AFDC payments sharply reduced for other families.[67] Due to reduced federal funding, 40 states reduced Medicaid coverage in 1981 and 30 made additional cuts in 1982.
- A review of all persons receiving Supplemental Security Income payments for disability resulted in eliminating benefits for several thousand recipients, although many were later returned to the rolls after an appeals process.
- Rents on low-income housing were raised, resulting in a larger share of poor families' incomes going to shelter costs. The share of household income that a family must pay toward rent in subsidized housing was targeted to be raised by one percentage point a year from 25 percent in 1981 to 30 percent in 1986.
- All public-sector employment provided under the Comprehensive Employment and Training Act (CETA), about 500,000 jobs, was eliminated with CETA's demise in 1983. Some of these jobs will eventually be replaced by private-sector jobs generated by the Joint Partnership Training Act. According to the Congressional Budget Office, job-training programs for low-income and unskilled persons have been reduced by 41 percent. In addition, the Work Incentive Program to help welfare mothers obtain jobs in the private sector was cut 38 percent, despite a recent study by the Manpower Research

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*In computing monthly payments for an AFDC family, any job earnings are taken into account according to the earned-income formula. Before 1981, the "thirty and a third" rule applied. AFDC payments were reduced by one dollar for every dollar earned, after discounting the first $30 earned in a month and one-third of the remaining monthly earnings, plus allowances for child care and work expenses. In 1981, the "thirty and a third" rule was restricted to four months in any 12-month period; in the other months, AFDC payments are reduced by a dollar for every dollar earned, with monthly allowances now limited to $160 per child for child care and $75 for work expenses. Also in 1981, states were given the option to reduce benefits still further by counting food stamps and housing subsidies as income.

When net earned income after these deductions equals what would be the full AFDC grant for a family of this size, the family becomes ineligible for all AFDC payments and Medicaid after a period set at four months in 1981 but extended in 1984 up to 12 months for AFDC and 15 months for Medicaid, though the family may still be eligible for food stamps. The loss of Medicaid is a deterrent to seeking a full-time job for many AFDC recipients. Few minimum-wage jobs offer medical insurance.

Development Corporation which showed that, with a little government assistance, many long-term welfare mothers can find gainful employment.

- Among social service program cutbacks, the Community Services Administration, which provided technical assistance and guidance to local Community Action Agencies, was eliminated and funding reduced for the Legal Services Corporation, which supports local Legal Aid offices.
- The Congressional Budget Office reports that funding for programs targeted mainly toward the poor was cut $57 billion in the four years from fiscal year 1982 through fiscal year 1985, after adjustment for inflation and unemployment.
- At the same time, the failure of the tax "cut" of 1981 to increase the personal exemption rate and earned-income tax credit (which provides refunds of Social Security taxes to low-income workers) raised tax burdens for low-income working families. Federal taxes paid by officially poor families increased 58 percent from 1980 to 1982.

PATIENTS
9:00 to 11:30 am
MONDAY-FRIDAY
CLINIC
CHILDREN
FAMILY
PODIATRY
CHEST

People line up for a meal at one of the private charity organizations meeting the food and medical needs of the poor in San Francisco, where the demand for such services doubled in 1984.

This list may seem dismaying and collectively these actions may have pushed the poverty population up by a million or so. But this does not explain why the number of poor increased by nearly 11 million between 1978 and 1983, nor why poverty began to increase in 1978, three years before these changes were implemented.

It should also be noted that some policies which increased the number of poor were implemented before Reagan's arrival. Most notably, continued deinstitutionalization of the mentally ill has added a few hundred thousand to the poverty population, but this policy originated under President John F. Kennedy in the early 1960s.

This is not to say that the cuts in welfare and social service programs are not important. Together they have made life much more difficult for the poor. Despite the Reagan administration's claims to the contrary, there are many homeless and hungry people in this nation who need help. The Harvard Physicians' Task Force on Hunger found abundant evidence of health and nutrition problems due to hunger.[68] The administration's own Department of Housing and Urban Development put the homeless at 250,000 to 350,000 in 1984, and most observers consider this a drastic underestimate.[69]

However, the recent increase in the number of poor stems primarily from economic changes rather than changes in social policy. Reversing the trend will depend far more on industrial and economic policies which relate to economic performance than it will on changes in social welfare policy.

Ample evidence of the importance of the economy for the poor is the fact that job earnings accounted for 75 percent of the income of poor male-headed families in 1983 and about 40 percent of the income in poor female-headed families, and are the single largest source of income for the poor.[70] Also, as the PSID data for 1969-78 revealed, 50 percent of people who slip into poverty in any one year do so because of a reduction in their family's earnings and increased earnings account for 80 percent of moves out of poverty.

President Reagan may have been no friend to the poor. But the social policy changes of his first term played only a minor role in the recent sharp rise in the offical poverty rate.

To their credit, the Reagan administration has made us take a hard look at government-funded social programs. Perhaps there was a complacency in our thinking about these programs in the late 1970s. However, objectively examined, most programs appear to be performing well—improving the health of the poor, providing children from poor families with educational opportunities closer to those of middle-class children (Pell grants to subsidize college education, for example, as well as Headstart), and providing food and shelter to the destitute.

Summary and Some Measures to Reduce Poverty

Since 1978 the number of poor has increased dramatically, the increase has been pervasive, and the depth of poverty has grown. Real median income for families in poverty has fallen and the gap between the income poor families receive and what is needed to lift them above the poverty line has widened. Where does the responsibility lie?

Most of the evidence examined here suggests that social welfare policies have had little to do with trends in the poverty rate of the nonelderly over the past quarter century. The major reason for the recent increase in poverty is summarized by Robert Reich:[71]

> "Since the late 1960s, America's economy has been slowly unraveling. The economic decline has been marked by growing unemployment, mounting business failures and falling productivity."

Economists Frank Levy and Richard Michel not only agree with this scenario but also identify the major losers:[72]

> "For the past 11 years [1974-1985], the American economy has been in a quiet depression in which neither real wages nor real family income has grown. This stagnation—a radical break in postwar trends—has been hard on everyone, but it has been hardest on the peak of the baby boom, those born after 1949. In a disastrous coincidence, these baby boomers were beginning their careers just as the economy went sour."

The antipoverty efforts launched in the 1960s were thwarted by a deteriorating economy which hit young workers particularly hard. This fact is little recognized as yet.

There is little evidence that today's poor are poor by choice as Murray implies. Government benefits for the poor and near-poor are not large enough to lure many into a life of welfare checks, food stamps, and public housing and most evidence indicates that people in these programs remain recipients for only a short time. Most of the working-age poor who can work are working or looking for work.

The simple fact is, many young workers cannot find steady jobs that pay enough to support a family. These people are faced with periodic unemployment and short-term reliance on government assistance and their circumstances have worsened considerably in the past few years. Some have become so discouraged that they have effectively dropped out. What can be done to help these young people and to reduce poverty in general?

Some measures to reduce poverty

There is wide agreement that the best way to reduce poverty is to put able-bodied people to work. Therefore a growing economy is vital. However, there is also concern that even in a growing economy there will be few decent-paying jobs for unskilled workers or workers whose skills do not match the needs of today's industries and businesses. This is where government-sponsored employment training programs would be most helpful. The money spent to provide young workers with employable skills will avoid much larger subsequent expenditures on welfare, not to mention how it would enhance these people's lives.

Saddled with a $200 billion annual deficit, the nation's budget is certainly not ripe for a plethora of new or expanded federal programs to help the poor. However, several steps could be taken with little or no impact on the budget deficit.

- There is almost universal agreement that those in poverty should not have to pay federal income taxes. Simple changes in the tax code which eliminate taxes paid by the poor, particularly raising the dependent allowance to a realistic level, would encourage the poor to work, promote family unity, and restore a sense of fairness that is now lacking. As reported by the Children's Defense Fund in the spring of 1985, with the tax code as it now stands, a family of four with an annual income of $12,000 and ordinary deductions pays more federal income tax than many large profitable corporations, including Boeing, General Electric, Du Pont, Texaco, Mobil, and AT&T.[73] As recently as 1977, the tax threshold for a family of four was 22 percent higher than the poverty threshold, but in 1984 the poverty threshold was 17.2 percent higher than the tax threshold.

- AFDC payments should be more standardized from state to state and payments should be linked to inflation. It makes no sense to provide an AFDC family in Mississippi with only one-fifth what the same family would receive in New York or California. And it makes no sense to set a standard of payments and then let that standard erode as did the real value of AFDC payments and food stamps—by 22 percent—between 1972 and 1984.

A VISTA volunteer trains young men in video operations. The money spent to provide young people with employable skills could avoid much larger subsequent expenditures on welfare.

- There is quite clear evidence that many programs to enhance the lives of the poor reduce government expenditures in the long run, but so far little effort has been made to expand them. Headstart, which provides disadvantaged youngsters with compensatory preschool training, has been shown to reduce high school dropouts, teenage pregnancy, and juvenile delinquency, all of which cost taxpayers money, but this program remains very small. The Manpower Research Demonstration Project has shown that a little training and assistance help many long-term welfare mothers to become self-supporting. Such successful programs should be expanded.

The changes outlined would enjoy widespread political support and little opposition. They do require federal involvement, but with only minor initial costs, they would increase individual self-sufficiency and reduce federal outlays in the long run. Obviously these changes would not bring about a dramatic reduction in poverty, but it is a place to start.

The Future of Proverty

Whether the recent upturn in poverty will continue is open to question. Part of the increase is clearly related to a rise in unemployment and decline in real income, so at least the new poor could be expected to benefit from the recovery of the economy in 1984—though that recovery slowed in the early part of 1985. But the "underclass" of hard-core unemployed are not likely to move out of poverty without substantial upgrading of their skills, training, and motivation and the programs which might provide such training are among those cut most heavily in recent years.

It is disturbing to note that the number of poor went up between 1982 and 1983 despite a rise in real median family income, a stable unemployment rate, a substantial increase in the number of adults with reported income from job earnings, and a slight decline in the divorce rate and the rate of increase in female-headed households. Normally these conditions should foster a decline in the poverty rate. Perhaps their impact will be seen when the poverty figures for 1984 are released.

Based on a time-series analysis of poverty and other economic measures, poverty researchers Peter Gottschalk and Sheldon Danziger projected in 1984 that "Poverty [will] remain above 1979 rates through the mid-1980s even if the economy grows according to official projections."[74] For 1984 they project a poverty rate of 14.6 percent, down from 15.2 percent in 1983. I suspect that estimate is likely to be close to the mark but difficult to interpret. Will it represent a turning point in the recent trend—an indication that poverty rates will continue to fall until they reach the rates of the mid-1970s? Or will it simply mean that the poverty rates of 1982 and 1983—15.0 and 15.2 percent—were unusally high due to a severe recession and the 1984 rate is an adjustment to bring the poverty rate in line with the slower increase experienced prior to 1982?

It is not clear how things will shape up as the baby boom ages. The declining size of the young adult pool will ease the pressure for available jobs, but the pent-up demand for jobs will not dissipate quickly. Further, there is no indication that well-paid jobs for unskilled labor are likely to return. It is possible that those who have recently been struggling to find and maintain employment will find permanent jobs as the ranks of labor force entrants fall. It is also possible that the structural changes in the economy will leave us with a group of people who will never find a permanent niche in the economy. Along with the homeless and the hungry that we see in the streets, many struggling young and not-so-young families may be doomed to a life outside the economic mainstream of America. □

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Asian Americans: Growth, Change, and Diversity

By Robert W. Gardner, Bryant Robey,
and Peter C. Smith

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Abstract—With heavy immigration fueled by U.S. immigration law changes in 1965 and the influx of over 700,000 Indochinese refugees since the Vietnam War ended in 1975, Asian Americans grew from 1.4 million in 1970 to 3.5 million, 1.5 percent of the U.S. population, by the April 1980 census and an estimated 5.1 million, 2.1 percent of the U.S. total, as of September 30, 1985. Barring major changes in U.S. immigration policy, they could number almost 10 million in 2000. The major Asian American groups are Chinese (21 percent of the total in 1985), Filipinos (20 percent), Japanese (15 percent), Vietnamese (12 percent), Koreans (11 percent), and Asian Indians (10 percent). In 1980, 49 percent of Asian Americans lived in California or Hawaii, 9 percent in New York, and 92 percent lived in metropolitan areas, compared to 75 percent of the general population. Except for the latest-arrived Vietnamese, the fertility of the six major groups is lower than the white average, labor force participation is generally higher and unemployment lower. In 1980, 35 percent of adults were college graduates, compared to 17 percent of white adults, and among the foreign-born, all but Koreans and Vietnamese exceeded the white proportion in the highest-status occupational category. Per-worker median incomes in 1979 were higher than the white median only for Japanese, Chinese, and Asian Indians, but family median incomes were as high or higher than the white median for all but Vietnamese, because Asian American households, especially among recent immigrants, contain more workers than white households. Asian Americans are not homogeneous and some groups still lag behind, particularly "second-wave" Indochinese refugees arriving since 1978, but with their strong family support and dedication to education and work, Asian Americans are likely to assimilate like other immigrant groups before them, especially as more of their groups are comprised of native-born Americans.

Editor: Jean van der Tak Graphics: George Hager

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Asian Americans: Growth, Change, and Diversity

By Robert W. Gardner, Bryant Robey, and Peter C. Smith

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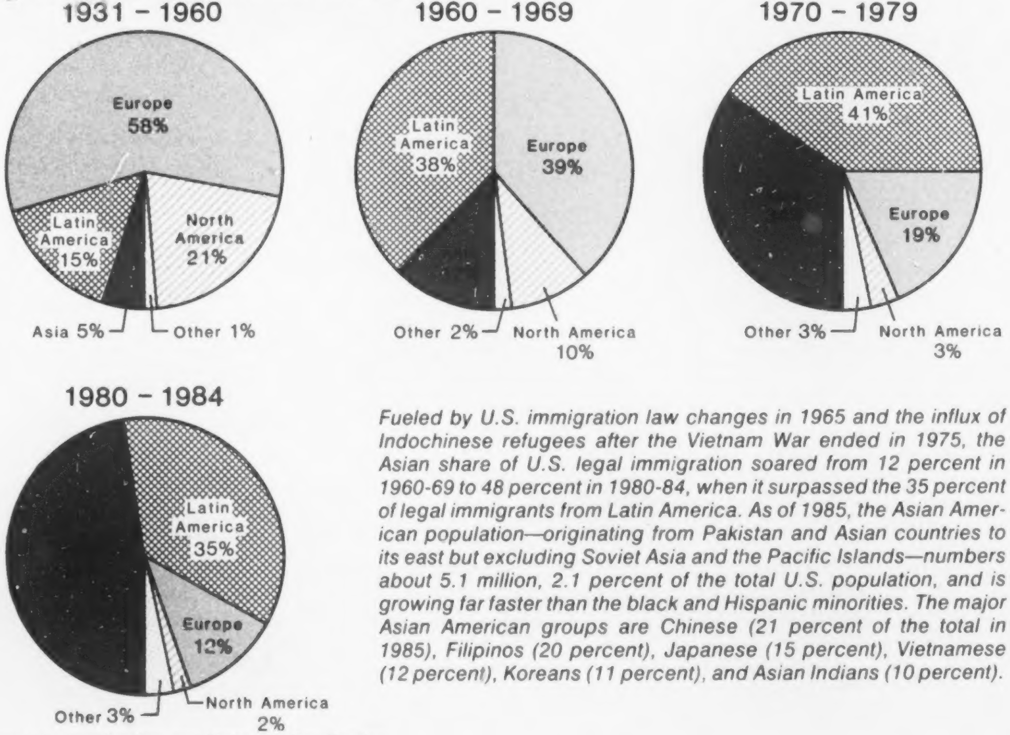
Figure 1. Legal Immigrants Admitted to the United States, by Region of Birth: 1931-1984



Source: U.S. Immigration and Naturalization Service

Fueled by U.S. immigration law changes in 1965 and the influx of Indochinese refugees after the Vietnam War ended in 1975, the Asian share of U.S. legal immigration soared from 12 percent in 1960-69 to 48 percent in 1980-84, when it surpassed the 35 percent of legal immigrants from Latin America. As of 1985, the Asian American population—originating from Pakistan and Asian countries to its east but excluding Soviet Asia and the Pacific Islands—numbers about 5.1 million, 2.1 percent of the total U.S. population, and is growing far faster than the black and Hispanic minorities. The major Asian American groups are Chinese (21 percent of the total in 1985), Filipinos (20 percent), Japanese (15 percent), Vietnamese (12 percent), Koreans (11 percent), and Asian Indians (10 percent).

Asian Americans: Growth, Change, and Diversity

By **Robert W. Gardner, Bryant Robey,** and **Peter C. Smith**
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Bryant Robey is Director of Public Affairs for the East-West Center of Honolulu and a member of the Center's Population Institute. He holds degrees from Amherst College and the Harvard Graduate School of Education. He was the founding editor of American Demographics *and is the author of many articles on demographics and of the just-published book,* The American People: A Timely Exploration of a Changing America and the Important New Demographic Trends Around Us *(E.P. Dutton).*

Peter Smith is a Research Associate at the East-West Population Institute and holds the Ph.D. in sociology from the University of Chicago. His research specialties include Asian demography, marriage and the family, geographic and social mobility, and the labor force. His most recent book is Migration of Women to Cities: The Asian Situation in Comparative Perspective *(with Siew-Ean Khoo and James T. Fawcett).*

The authors specially thank Michael Levin of the Bureau of the Census, coauthor with Robert Gardner, Peter Smith, and Herbert Barringer of a forthcoming 1980 census monograph on Asian and Pacific Americans, for preparing and providing many of the special tabulations used in this Bulletin. *They also thank Shanta Danaraj, Macrina Abenoja, Gerald Platt, Ruth Sahara, and Shawn Uesigi for their help and recognize their Population Institute colleagues Fred Arnold and James Fawcett for their research on Asian immigration, which is reflected in this* Bulletin.

The 1980 U.S. census counted 3.5 million Asian Americans, up from 1.4 million in 1970. Asian Americans made up just 1.5 percent of the total U.S. population of 226.5 million as of April 1, 1980, but this was the third largest racial or ethnic minority after blacks (26.5 million and 11.7 percent of the total) and Hispanics (14.6 million, 6.4 percent of the total). Asians increased far more during the 1970s (141 percent) than blacks (17 percent) or Hispanics (39 percent), although Hispanics added the most numbers of the three minorities.

Taking into account natural increase (births minus deaths) and continuing immigration, especially of refugees from Southeast Asia, we estimate the Asian American population at 5.1 million as of September 30, 1985, about 2.1 percent of the some 239 million total U.S. population as of this date. The gain of nearly 50 percent in the five and a half years since the 1980 census reaffirms Asian Americans' status as currently the U.S.'s fastest growing minority. Barring substantial changes in U.S. immigration law, Asian Americans could total 9.9 million by the year 2000 and approach 4 percent of the U.S. population.

These new residents are having an impact on this country that far exceeds their numbers, yet Americans know surprisingly little about them. As a group, Asian Americans do not resemble other racial or ethnic minorities. Less well known is the fact that Asian Americans vary widely in their characteristics according to their cultural origins and when they arrived in the U.S.

Asia is a vast region that contains over half the world's population. China alone has more than four times the U.S. population. The rich variety of peoples in Asia, fluctuating U.S. immigration policies, and this country's changing relations with Asia have combined to shape the characteristics of today's Asian Americans.

Successive waves of immigrants have come to the U.S. from Asia for more than a century, beginning with the Chinese and Japanese. More recently, people from the Philippines, India, and Korea have come in growing numbers. Waves of refugees from Indochina, especially Vietnam, followed the end of the Vietnam War in 1975. From 1931 to 1960, Asians accounted for only 5 percent of immigrants legally admitted to the U.S., just one-third the 15 percent of immigrants from Latin America, and far below the 58 percent of immigrants still coming from Europe (Figure 1, page 2). With changes in the immigration law in 1965, the proportion of legal immigrants from Asia grew to 34 percent by 1970-79, still below the 41 percent from Latin America. By 1980-84, however, the share of Asian immigrants, 48 percent, exceeded legal immigrants from Latin America, 35 percent, and far outstripped the share from Europe, shrunk to just 12 percent.

Though this nation was settled largely from the countries of Europe, now, as the balance shifts, an America that historically has looked across the Atlantic finds itself looking across the Pacific as well. America's future is likely to be increasingly Asian.

This *Bulletin* examines the characteristics of Asian Americans, how their numbers have grown, where they live, how different groups vary in age structure, childbearing, health, and longevity. It reports on the kinds of households Asian Americans form and how they fare with regard to education, occupation, and income.

Once looked down upon as poorly educated, blue-collar "Orientals," Asian Americans are now often perceived as a "model minority." It is true that Asian Americans as a whole are better educated, occupy higher rungs on the occupational ladder, and earn more than the general U.S. population and even white Americans. But the broad averages mask great disparities; many recent arrivals, particularly refugees from Indochina, come ill-equipped for life in America and fare far less well than other Asians.

This *Bulletin* presents the first comprehensive look at many important facts about Asian Americans and how the groups differ, made possible by special tabulations of data gathered in the 1980 census.* This permits more detailed analysis than possible with published data from the 1980 census, which often include Pacific Islanders with Asians, making the broad averages less accurate. The 1980 census data are the latest available to give a true picture at the national level of Asian Americans and the various groups among them. Media stories and surveys by researchers can provide only fragments of evidence. Also, the numbers of Asian Americans in the different groups are relatively still too small to yield statistically reliable data from national surveys conducted by the Census Bureau between censuses, such as the monthly Current Population Survey. We believe our 1980 information is still valid for most of the Asian American population, including new arrivals since the census. One exception is for Vietnamese and other Indochinese refugees, whose numbers have increased dramatically since the census was taken on April 1, 1980. For these latest refugees, whose characteristics may well be different from those of refugees counted in the census, we provide information from recent special surveys.

The *Bulletin* begins with a look at the current numbers of Asian Americans and how this population is defined.

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* These tabulations form the basis for a monograph on Asian Americans by two of the authors of this *Bulletin*, Robert Gardner and Peter Smith, plus Herbert Barringer (University of Hawaii) and Michael Levin (Bureau of the Census), to be published in 1986 in a series of special monographs on results of the 1980 census, sponsored by the Social Science Research Council.

Table 1. Asian American Population: 1980 Census and Estimates for September 30, 1985

	April 1, 1980, census				Estimates for September 30, 1985			
Rank	Ethnic group	Number	Percent	Percent foreign-born of group	Ethnic group	Number	Percent	Percent increase in number Apr. 1, 1980-Sept. 30, 1985
	Total	3,466,421	100.0	—	Total	5,147,900	100.0	48.5
1	Chinese	812,178	23.4	63.3	Chinese	1,079,400	21.0	32.9
2	Filipino	781,894	22.6	66.3	Filipino	1,051,600	20.4	34.5
3	Japanese	716,331	20.7	28.4	Japanese	766,300	14.9	7.0
4	Asian Indian	387,223	11.2	70.4	Vietnamese	634,200	12.3	158.8
5	Korean	357,393	10.3	81.8	Korean	542,400	10.5	51.8
6	Vietnamese	245,025	7.1	90.5	Asian Indian	525,600	10.2	35.7
	Other Asian	166,377	4.8	—	Laotian	218,400	4.2	358.0
	Laotian	47,683	1.4	—	Kampuchean	160,800	3.1	902.2
	Thai	45,279	1.3	—	All other	169,200	3.3	64.8
	Kampuchean	16,044	0.5	—				
	Pakistani	15,792	0.5	—	Percent of total U.S. population (239,447,000) = 2.1 percent			
	Indonesian	9,618	0.3	—				
	Hmong	5,204	0.2	—				
	All other[a]	26,757	0.8	—				
	Percent of total U.S. population (226,545,805) = 1.5 percent							

Sources: 1980: Bureau of the Census, *1980 Census of Population*, PC80-S1-12, *Asian and Pacific Islander Population by State*, December 1983, Table B. 1985: Estimates by *Bulletin* authors.

[a] Includes Bangladeshi, Bhutanese, Bornean, Burmese, Celebesian, Cernan, Indochinese, Iwo-Jiman, Javanese, Malayan, Maldivian, Nepali, Okinawan, Sikkimese, Singaporean, Sri Lankan and Asian not specified (e.g., "Asian").

Current Numbers and Definition

For our purposes, Asia includes Pakistan and the countries lying east of it in South Asia, Southeast Asia, and East Asia, but not Soviet Asia or the Pacific Islands. Asian Americans include immigrants and refugees from these countries and the U.S.-born descendants of earlier arrivals living in the U.S., plus students, businessmen, and their families from these countries whose "usual" residence is the U.S. at the time of the census (which is conducted on a *de facto* basis). Excluded are visitors and others from Asia who are temporarily in the U.S.

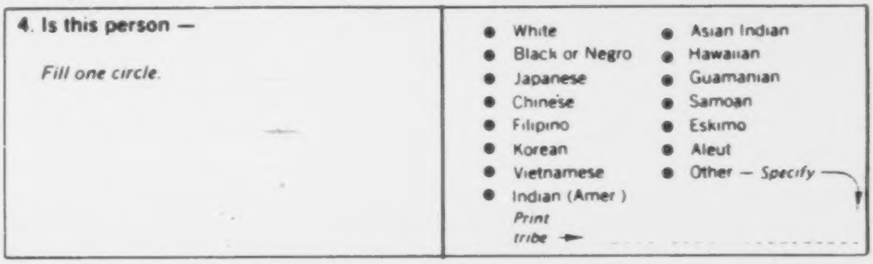
In this *Bulletin* the focus is on the six largest Asian American groups—Chinese, Filipinos, Japanese, Asian Indians, Koreans, and Vietnamese. Combined, they accounted for over 95 percent of the 3.5 million Asian Americans counted in the 1980 census. Their numbers were: Chinese, 812,000; Filipinos, 782,000; Japanese, 716,000; Asian Indians, 387,000; Koreans, 357,000; and Vietnamese, 245,000 (Table 1). Twenty-two smaller Asian groups were reported in the census, of which the largest were: Laotian, 47,700; Thai, 45,300; Kampuchean (Cambodian), 16,000; and Pakistani, 15,800.

The proportion of foreign-born (immigrant) Asian Americans in the six largest groups was only 28 percent for Japanese but about two-thirds for Chinese (63 percent) and Filipinos (66 percent) and higher still for the other three groups (Table 1).

Using data on immigration and refugee flows along with calculations of natural increase since the census date of April 1, 1980, we have estimated the Asian American population as of September 30, 1985 (Table 1). These estimates—the most current available—indicate that this population increased by over 1.6 million in these five and a half years, from

Figure 2. The Race and Ancestry Questions in the 1980 Census

Race question

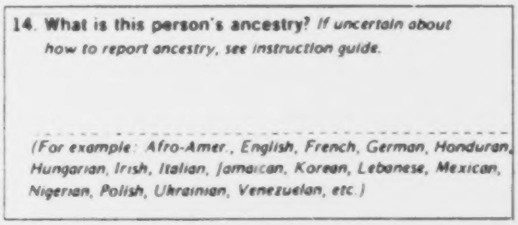


4. Is this person —

Fill one circle.

- ● White
- ● Black or Negro
- ● Japanese
- ● Chinese
- ● Filipino
- ● Korean
- ● Vietnamese
- ● Indian (Amer.) *Print tribe* →
- ● Asian Indian
- ● Hawaiian
- ● Guamanian
- ● Samoan
- ● Eskimo
- ● Aleut
- ● Other — *Specify*

Ancestry question



14. What is this person's ancestry? *If uncertain about how to report ancestry, see instruction guide.*

(For example: Afro-Amer., English, French, German, Honduran, Hungarian, Irish, Italian, Jamaican, Korean, Lebanese, Mexican, Nigerian, Polish, Ukrainian, Venezuelan, etc.)

Instructions to the respondent for ancestry question

14. Print the ancestry group with which the person *identifies.* Ancestry (or origin or descent) may be viewed as the nationality group, the lineage, or the country in which the person or the person's parents or ancestors were born before their arrival in the United States. Persons who are of more than one origin and who cannot identify with a single group should print their multiple ancestry (for example, German-Irish).

just under 3.5 million to almost 5.2 million—an annual growth rate of over 7 percent. This is slightly less than the Asian American growth rate of almost 8.8 percent per year during the 1970s, but it is far higher than the annual growth rate of 1.1 percent for the total U.S. population since the 1980 census. Between April 1, 1980, and September 30, 1985, the proportion of Asian Americans in the total U.S. population increased from a little over 1.5 percent to 2.1 percent.

No Asian group in the U.S. numbered more than a million in 1980. By September 30, 1985, both Chinese and Filipinos exceeded a million. The Chinese were still in first place with 1,079,400, but likely soon to be overtaken by Filipinos, with an estimated 1,051,600 as of this date and a faster growth rate. Vietnamese increased by over 150 percent in these five and a half years, from 245,025 to 634,200, and Koreans by over 50 percent, from 357,393 to an estimated 542,400.

Definition

How do we determine who is Asian? There is no scientific category based on biologic stock. The Census Bureau's concept of race reflects self-identification by respondents to the census questionnaire. In 1980 the race question, appearing as number 4 on the "short" questionnaire distributed to all households, listed six Asian groups among possible answers—Japanese, Chinese, Filipino, Korean, Vietnamese, and Asian Indian—plus an "other" category for other possible Asian responses (Figure 2).

This may seem a straightforward way to define the Asian American population but in practice it is not. Census data on race based on self-identification are subject to changing attitudes about race; the same individual could report his or her race differently on successive censuses. Moreover, census procedures do not allow a person to be counted as belonging to a mixed race, and the census gives us no information on how many individuals indicated they were of mixed race.

The number of Asian categories provided for on the census form has changed over the years, primarily reflecting growing populations for the different groups. In 1970 data on Asian Indians were included in the "white" category, while Vietnamese and many other Asian groups were put in a general "other" race classification. Such changes influence the number of Asian American responses to the census race question and limit our knowledge of Asian American growth and characteristics over time.

For the first time in 1980, the Census Bureau also asked a question on ancestry, as item 14 on the "long" questionnaire distributed to a 19 percent sample of all households (Figure 2). This provides an additional perspective on who should be considered Asian American. Here the Bureau *did* accept and tabulate multiple responses, so that the total number of Asians measured by ancestry is greater than the total identified by race. For example, the sample questionnaire indicated over 894,000 persons of Chinese ancestry, whereas only 812,200 Chinese were identified as being of Chinese race from answers to question 4 in the 100 percent questionnaire. These differences reflect individuals' own identification with an ethnic origin, which may be different from their view of "race" or the country where they were born. The ancestry question is open-ended; the race question is not. (For example, 22,330 persons identified from the ancestry question as ethnic Chinese placed themselves in the Vietnamese category in answers to the "race" question, presumably because they were born in Vietnam.) After taking these differences into consideration, there seems to be a good correspondence between the concepts of Asian race and Asian ancestry. Published census tabulations use the concept of race, and that is the one we rely on for this *Bulletin*.

How the Numbers Grew

Between the censuses of 1970 and 1980, a decade in which the total U.S. population increased by only 11 percent, the Asian American population soared by 141 percent. Some Asian groups grew much faster than that. This dramatic increase took many people by surprise, but it should not have. It was a direct result of changes in U.S. immigration law enacted in 1965, plus admission of refugees from Vietnam, Cambodia, and Laos following the downfall of Saigon in April 1975. Although the trend was new, the immigrant influx—if not that of refugees—fit historic patterns.

The growth of the Asian American population is intimately linked with the history of immigration policy for Asians. This policy has moved in sudden starts and stops along with changes in social attitudes and the U.S. economy, plus unforeseen events like the U.S. defeat in Vietnam. The desire of U.S. employers for cheap labor often has vied with the animosity of "nativists" toward Asian immigrants who were so unlike the dominant European-origin population.

Successive waves of Asian immigrants from different countries have influenced the relative size of different Asian groups throughout this century. In 1900, for example, Chinese were 58 percent and Japanese 42 percent of Asians counted in the census and were virtually the only Asians in the country (Table 2, page 8). By 1920 the share of Chinese had dropped to 26 percent, Japanese stood at 66 percent, and Filipinos had increased from zero to 8 percent. At the time of the 1980 census, Japanese had dropped to only 21 percent, while Filipinos had risen almost equal to the Chinese, at 23 percent (Table 1). Asian Indians were 11 percent in 1980, Koreans 10 percent, and Vietnamese 7 percent—

Table 2. Total U.S. and Asian American Population: 1900-1980

(Numbers enumerated at census dates)

Census year	Total U.S.	Total Asian	Japanese	Chinese	Filipino[a]	Korean	Asian Indian	Vietnamese
1900	76,212,168	204,462[b]	85,716	118,746	—	—	—	—
1910	92,228,531	249,926[b]	152,745	94,414	2,767	5,008	—	—
1920	106,021,568	332,432[b]	220,596	85,202	26,634	6,181	—	—
1930	123,202,660	489,326[b]	278,743	102,159	108,424	8,332	—	—
1940	132,165,129	489,984[b]	285,115	106,334	98,535	8,568	—	—
1950	151,325,798	599,091[b]	326,379	150,005	122,707	7,030[c]	—	—
1960	179,323,175	877,934[b]	464,332	237,292	176,310	—	—	—
1970	203,211,926	1,429,562[b]	591,290	436,062	343,060	69,150[d]	—	—
1980	226,545,805	3,466,421[e]	716,331	812,178	781,894	357,393	387,223	245,025

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-B1, *General Population Characteristics*, May 1983, Table 40, and various census volumes for the years shown.

[a] Included with "other races" for the U.S. in 1900 and for Alaska in 1920 and 1950.

[b] Total only of Asian groups listed for this year.

[c] Data for Hawaii only.

[d] Excludes Koreans in Alaska.

[e] Includes 166,377 other Asian Americans, listed separately in *Bulletin* Table 1. Data for 1980 in this table are from a sample and do not exactly agree with 1980 census data for Asian population published in the above-cited Census Bureau volume from the 100 percent tabulations, which were: Japanese, 700,794; Chinese, 806,040; Filipino, 774,652; Korean, 354,593; Asian Indian, 361,531; Vietnamese, 261,729.

groups with almost no representation in the U.S. before the 1960s.

The history of Asian Americans begins essentially with the arrival after 1849 of Chinese recruited to work in California, the beginning of a large influx touched off by the gold rush. The number grew rapidly, with thousands working on construction of the transcontinental railroads in the 1860s. Agitation against the Chinese appeared and grew during the 1870s, especially in California where they became victims of special taxes, rioting, and an anti-Chinese law, passed in 1879. In 1882 Congress passed the Chinese Exclusion Act, which essentially banned immigration of Chinese into the U.S.

One result of the anti-Chinese sentiment was the substitution of Japanese workers for Chinese. The 1900 census counted close to 86,000 Japanese, along with some 119,000 Chinese. These totals for the first time included Hawaii, which was annexed in 1898, increasing the Asian population of the U.S. by 87,000.

By the 1910 census, the number of Chinese had actually declined to 94,000. This census counted 5,000 Koreans, but the Korean government had ended emigration in 1905 and the number of Koreans did not rise much above this figure until the 1960s. In 1985 Koreans in the U.S. number over half a million (Table 1)—evidence of the important impact recent immigration policies have had on the growth of America's Asian population.

In 1906, 160 Filipinos were recruited for work in the Hawaiian sugar plantations. The U.S. had annexed the Philippines in 1898 and until 1934, Filipinos were allowed to move freely into the country as U.S. nationals. By 1930 they numbered 108,000—more than the 102,000 Chinese. Filipino immigration dropped to a trickle during the depression of the 1930s and the next two decades, but picked up rapidly with the 1965 immigration law change. Since 1960 more immigrants have arrived from the Philippines than from any other country except Mexico,[1] and by 1985, as noted, Filipinos had almost displaced Chinese as the largest Asian American group.

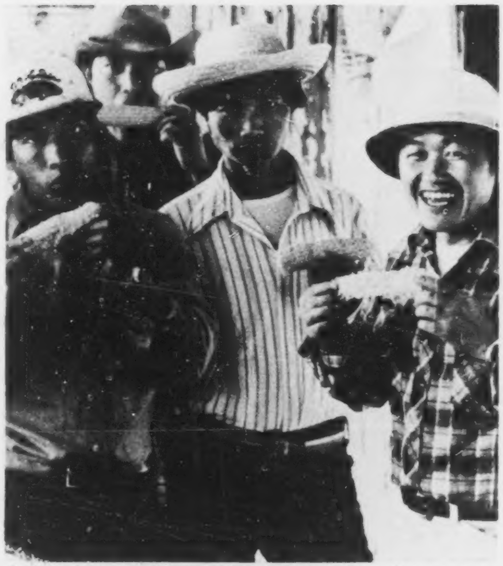
Strict immigration laws of the 1920s virtually halted Asian immigration into the U.S. The 1924 National Origins Act, designed mainly to reduce immigration from South and East Europe in favor of Northwestern Europeans, also set a quota for

Asians at virtually zero. By 1943 the quota had risen only to 105 for Chinese.

Immigration from all sources was low during the depression of the 1930s. In 1940, as in 1930, the census counted about 490,000 Asian Americans. By 1960 the number had risen to 878,000, partly due to some easing of Asian immigration permitted with the McCarran-Walter Act of 1952. With the baby boom of the 1950s the U.S. population was growing rapidly, so the growing number of Asians among the total population attracted no attention.

Then immigration policy was liberalized in 1965 and Asian immigration skyrocketed. The 1965 law, taking effect in 1968, abolished the national origins quota system in favor of one giving preference to family members of persons already in the U.S. and workers with skills needed in the U.S. For the Eastern hemisphere (which includes Asia), the annual quota was set at 170,000, with no more than 20,000 from any one country. The Western hemisphere overall quota was 120,000, with no country restriction until an amendment of 1976 when the 20,000 annual per-country limit also applied. Currently, the worldwide annual quota for legal immigrants is 270,000, with 20,000 from any one country. Also admitted beyond this numerical limitation are spouses, parents, and unmarried children under age 21 of U.S. citizens, plus refugees. By 1981, with soaring numbers of refugee admissions, some 60 percent of Asian immigrants admitted to the U.S. came outside the numerical limitation, in contrast, for example, to 52 percent of immigrants from Europe and 28 percent of those from South America.[2] Further, by 1981, most Asians counted as immigrants were not newly arrived in Los Angeles' LAX Airport or New York's Kennedy Airport, but persons already in the U.S. who had come earlier either as refugees or as tourists, businesspeople, or students with nonimmigrant visas and had their status adjusted to permanent resident (immigrant) status without leaving the country.

Between April and December of 1975, the U.S. admitted the first great wave of Indochinese refugees in the aftermath of defeat in the Vietnam War—some 130,400 altogether, with 125,000 from Vietnam itself.[3] The number dropped to 17,000 over the next two years. Then from 1978 it surged again as hundreds of thousands of "boat people" fled from Vietnam and Cambodians (Kampucheans) and Laotians escaped overland and the U.S. agreed to accept first 7,000 and then 14,000 refugees a month to relieve desperate conditions in refugee camps. This second wave peaked in fiscal year 1980 (October 1, 1979–September 30, 1980) with the arrival of 166,700 Indochinese refugees, 95,200 from Vietnam. These and later Indochinese refugees were admitted under the Refugee Act of 1980, which took effect April 1, 1980, the same day as the census, and thus most were not counted in the 1980 census. By the end of September 1984, some 711,000 Southeast Asian refugees had arrived in the U.S. since April 1975 and they represented almost one Asian American in seven.[4]



Indochinese refugees learn about American ways. Over 700,000 Southeast Asian refugees have arrived in the U.S. since the end of the Vietnam War in April 1975.

Since 1981 the number of Indochinese refugees admitted annually has not quite equaled the quotas set under the Refugee Act, which have ranged from 168,000 in fiscal year 1981 down to 50,000 in fiscal year 1985. By the end of May 1985, the number of refugees still awaiting resettlement from camps in Southeast Asia was down to 155,000.[5] However, immigration from Indochina is likely to continue at substantial levels. Under the Orderly Departure Program agreed to by the U.S. and Vietnam in 1980, several thousand Vietnamese a year are eligible to enter the U.S. as immigrants, in addition to refugees. Also, more and more Indochinese refugees are obtaining U.S. citizenship, for which they are eligible after five years in the U.S. if they have meanwhile adjusted to permanent resident status, which they may do after one year. Like other new U.S. citizens among recent Asian immigrants, they are quickly following up on their right to bring in immediate relatives who do not count in the 20,000 per-country annual immigrant quotas, as well as other close relatives high on the preference list for numerically limited immigrants.

As the number of Asian immigrants soared after 1965, U.S. fertility began to subside after the baby-boom years of 1947-1964. Immigration from Europe also dropped as low fertility rates there removed sources of potential immigrants. These trends virtually guaranteed that Asian Americans would increase their share and visibility in the U.S. population.

In 1965 only 20,700 Asians (from all countries of Asia) were admitted to the U.S., compared to 114,000 Europeans. In fiscal year 1984 (ending September 30, 1984), according to the Immigration and Naturalization Service, Europeans admitted as immigrants had dropped to 64,000, while the number for Asians was up to 256,300.[6]

Between 1960 and 1970, the combined growth rate for Chinese, Japanese, and Filipinos in the U.S. was 4.5 percent a year, higher than for any other intercensal decade since the turn of the century. In the next decade, from 1970 to 1980, the average growth rate for Chinese, Japanese, Filipinos, and Koreans rose to over 6 percent. Recent growth has been high for all six major Asian groups except the Japanese. Japanese are not immigrating to the U.S. in large numbers today, while immigration is high from the Philippines, Korea, India, China (including the People's Republic of China, Taiwan, and Hong Kong), and, of course, Vietnam. Some 43 percent of Asians in the six major groups who were counted in the 1980 census said they had immigrated into this country since 1970. Immigration has been a driving force behind the increase in the size of the Asian American population and, barring new restrictive immigration legislation, this trend is likely to continue.

Table 3. Total U.S. and Asian American Population, by Region: 1980

(Percent distribution)

	Region			
Population	Northeast	Midwest	South	West
Total U.S.	21.7	26.0	33.3	19.1
Total Asian[a]	17.1	12.3	14.2	56.4
Japanese	6.5	6.5	6.6	80.3
Chinese	26.8	9.2	11.3	52.7
Filipino	9.9	10.4	11.0	68.8
Korean	19.1	18.1	19.9	42.9
Asian Indian	34.2	23.1	23.4	19.2
Vietnamese	9.0	13.4	31.4	46.2

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-B1, *General Population Characteristics*, Table 53, and PC80-S1-12, *Asian and Pacific Islander Population by State*, Tables 1 and 4.

[a] Includes all Asian Americans; not just those listed separately.

Where Asian Americans Live

Asian Americans are far more concentrated geographically than the general U.S. population. The 1980 census found 56 percent of Asian Americans living in the West (which includes Hawaii), compared with just 17 percent of all Americans, and only 14 percent of Asian Americans in the South, versus 33 percent of all Americans (Table 3).

These regional patterns, however, vary among the different groups. Japanese and Filipinos are especially concentrated in the West, and more than half of Chinese Americans also live there, but only one in five Asian Indians. Only 17 percent of all Asian Americans live in the Northeast, but 27 percent of Chinese and 34 percent of Asian Indians, compared with 22 percent of all Americans. Koreans, although 43 percent live in the West, are distributed most similarly to the total population. Vietnamese, found in relatively large numbers in the South (especially Texas, Louisiana, and Virginia), are more widely distributed than the other five major Asian American groups because the aim of the refugee resettlement program has been to disperse refugees about the country in an effort to speed their assimilation and lessen the impact on American communities of large groups arriving at one time. The largest share, however, were settled in California and many refugees have later moved there to be with relatives and friends.

Asian Americans are even more clustered in just a few states. At the time of the 1980 census, nearly 59 percent lived in California, Hawaii, and New York, and only four other states had 100,000 or more—Illinois, Texas, New Jersey, and Washington (Table 4). California is the first-ranking state for both Asian Americans and Americans in general but in 1980, 36 percent of Asian Americans lived there, compared to 10 percent of the total U.S. population. The difference was even greater in Hawaii, with 13 percent of Asian Americans but only 0.4 percent of all Americans counted in 1980. Nearly half the population of Hawaii is Asian. California, the state with the next highest proportion of Asian Americans in its population, is just 5.3 percent Asian.

Except for Asian Indians, California has the highest proportion among the six largest Asian American groups, especially for Filipinos (46 percent) and Chinese (40 percent). Nine percent of all Asian Americans live in New York, but twice that proportion of Chinese and Asian Indians. Japanese are most heavily concentrated in Hawaii, with twice the representation of Filipinos and almost five times that of Chinese.

While Asian Americans are still heavily

Table 4. Seven States with 100,000 or More Asian Americans in 1980

(Population numbers in thousands)

Area	Total U.S. population	Total Asian[a]	Japanese	Chinese	Filipino	Korean	Asian Indian	Vietnamese
United States	226,546	3,466	716	812	782	357	387	245
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
California	23,668	1,247	269	326	358	103	60	85
Percent	10.4	36.0	37.5	40.1	45.8	28.7	15.4	34.8
Hawaii	965	453	240	56	132	17	1	3
Percent	0.4	13.1	33.5	6.9	16.9	4.9	0.2	1.4
New York	17,558	328	25	147	36	33	68	6
Percent	7.8	9.4	3.5	18.1	4.6	9.3	17.5	2.4
Illinois	11,427	171	18	29	44	24	37	6
Percent	5.0	4.9	2.6	3.6	5.7	6.8	9.7	2.6
Texas	14,229	130	12	27	16	14	23	28
Percent	6.3	3.7	1.7	3.3	2.0	3.9	6.0	11.3
New Jersey	7,365	108	10	23	24	13	31	3
Percent	3.3	3.1	1.4	2.9	3.1	3.7	7.9	1.2
Washington	4,132	105	27	18	26	13	4	9
Percent	1.8	3.0	3.8	2.2	3.3	3.8	1.1	3.6

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-B1, *General Population Characteristics*, Table 124, and PC80-S1-12, *Asian and Pacific Islander Population by State*, Table 4.

[a] Includes all Asian Americans; not just those listed separately.

concentrated in the West, the 1970s brought their distribution among the country's four regions closer to that of the population in general. For the U.S. population as a whole, the proportions living in the Northeast and Midwest fell from 1970 to 1980 and rose in the South and West. For Asian Americans, the share living in the West fell to below 60 percent, while the share for all other regions rose. The South was the biggest proportionate gainer.

These changes were due primarily to internal migration and especially to settlement patterns of new immigrants. Over 90 percent of the growth of the Asian American population in the West and South was due to immigration from out of the country and less than 10 percent to net internal migration. The Northeast and Midwest actually lost Asian Americans through net internal migration but gained overall because of the large influx of newly arriving immigrants. The largest streams of Asian Americans moving between regions during the 1970s were toward the West, but internal migration had more impact in the South because its initial Asian American population was so much smaller than that of the West.

Urban dwellers

Asian Americans are far more metropolitan than Americans as a whole. In 1980, 92 percent in the six major groups were living in standard metropolitan statistical areas, with the proportion close to 96 percent in the Northeast, 93 percent in the West, and 89 percent in the Midwest and South.[7] For the total population, the proportions were 75 percent overall, 85 percent in the Northeast, 83 percent in the West, 71 percent in the Midwest, and 67 percent in the South. Among the different Asian American groups, Japanese are the least metropolitan, at 89 percent, and Chinese the most, at 96 percent.

Just four metropolitan areas, however, had 50,000 Asians of any one ethnicity in 1980. There were more than 50,000 Chinese in all four—San Francisco, Honolulu, New York, and Los Angeles—and similar concentrations of Japanese in Honolulu and Los Angeles, Filipinos in Los Angeles, San Francisco, and Honolulu, and Koreans in Los Angeles.[8]

One reason Asian Americans are so metropolitan is that so many are recent immigrants. Immigrants traditionally flock to cities; later generations are distributed more evenly. This pattern is likely to be repeated with Asian Americans as immigrants make up smaller and smaller proportions of their populations.

Age and Sex Composition

Immigration and different immigration histories are also strongly reflected in the age and sex composition of the Asian American population, which differs from that of the general U.S. population and among the different Asian groups.

Age differences

In 1980 the median age—the point which divides a population into older and younger halves—was 30 for the U.S. population as a whole (Table 5). The median age was much higher than this for Japanese Americans (33.5), almost the same for Asian Indians (30.1) and Chinese (29.6), and lower for Filipinos (28.5) and Koreans (26.0) and especially Vietnamese (21.5). For comparison, the median age in 1980 for white Americans was 31.3, for blacks, 24.9, and for Hispanics, 23.2.

The Japanese median age is high because of low fertility and high life expectancy, but also because the Japanese population is not much affected by recent high levels of immigration. The low median age for Vietnamese primarily reflects their recent arrival in America, since young people are more likely than older people to migrate. Although the Chinese and Asian Indians have median ages close to that of the general population, their age structures are quite different because they have different his-

Table 5. Median Ages of U.S., White, Black, Hispanic, and Asian American Populations: 1980

Population	Median age		
	Total	Male	Female
Total U.S.	30.0	28.8	31.2
White	31.3	30.0	32.5
Black	24.9	23.5	26.1
Hispanic	23.2	22.6	23.8
Japanese	33.5	31.0	35.9
Chinese	29.6	29.4	29.8
Filipino	28.5	27.7	29.1
Korean	26.0	23.3	27.1
Asian Indian	30.1	30.2	30.1
Vietnamese	21.5	20.6	22.7

Sources: Asian Americans: Bureau of the Census, special tabulations of the Asian American population counted in the 1980 census, 1984, unpublished. All other: Bureau of the Census, *1980 Census of Population*, PC80-1-B1, *General Population Characteristics*, Table 41.

tories of births, deaths, and especially immigration.

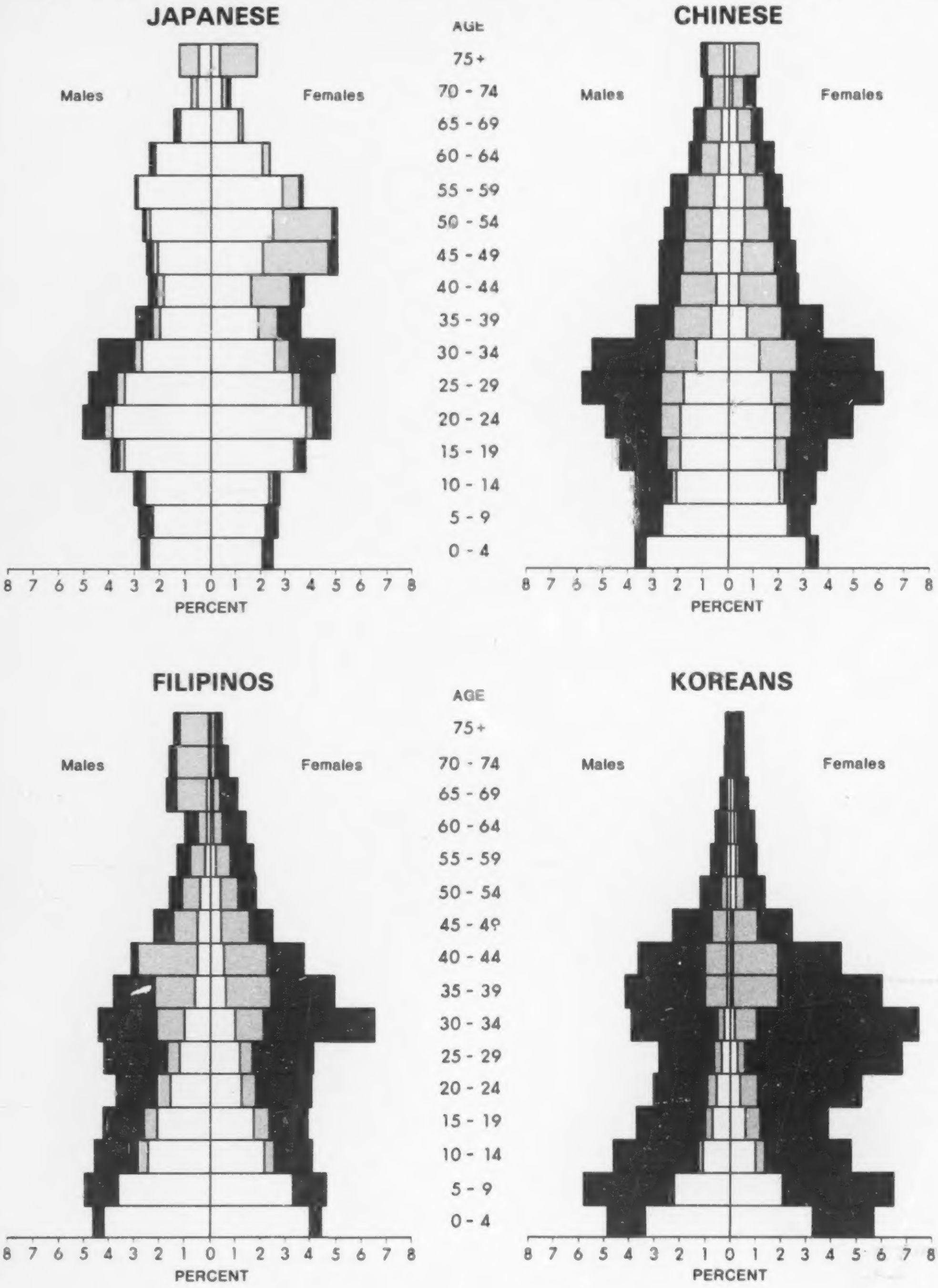
These age structure differences are graphically illustrated in the age-sex population pyramids shown in Figure 3 (pages 14-15). The pyramid for the U.S. population as a whole in 1980 is shaped most by fertility and little by immigration. The low-fertility years of the 1930s account for the relatively small group of people aged 40-49 in 1980. The waxing and waning of the baby boom, which peaked from 1955 to 1964, is evident in the bulge at ages 15-24 and the constriction at younger ages. In contrast, the relatively greater numbers of Japanese, Chinese, and Filipinos in the oldest age groups reflect the immigrants from these countries earlier in the century who are now reaching the end of their lifespans. The high proportion of Vietnamese under age 25 reflects the waves of young refugees since 1975. America has virtually no older Vietnamese because almost no Vietnamese immigrated to the U.S. before the 1970s.

The pyramids for the six major Asian groups are divided into three parts which help reveal the factors behind these age structure differences: the native-born (white core of each pyramid); immigrants arriving before 1970 (lighter part of the red colored areas); and immigrants arriving from 1970 to 1980 (darker colored areas). The distinction between native-born and immigrants shows that almost all Vietnamese in the U.S. are immigrants, while relatively few Japanese Americans alive in 1980 came to this country as immigrants. The two-part shading in the immigrant portion of the pyramids highlights the importance of the 1965 legislation that opened the door to Asian immigration. Through the door have come thousands of Asians in their twenties and thirties. The white bars at the youngest ages include the U.S.-born children of these post-1965 immigrants.

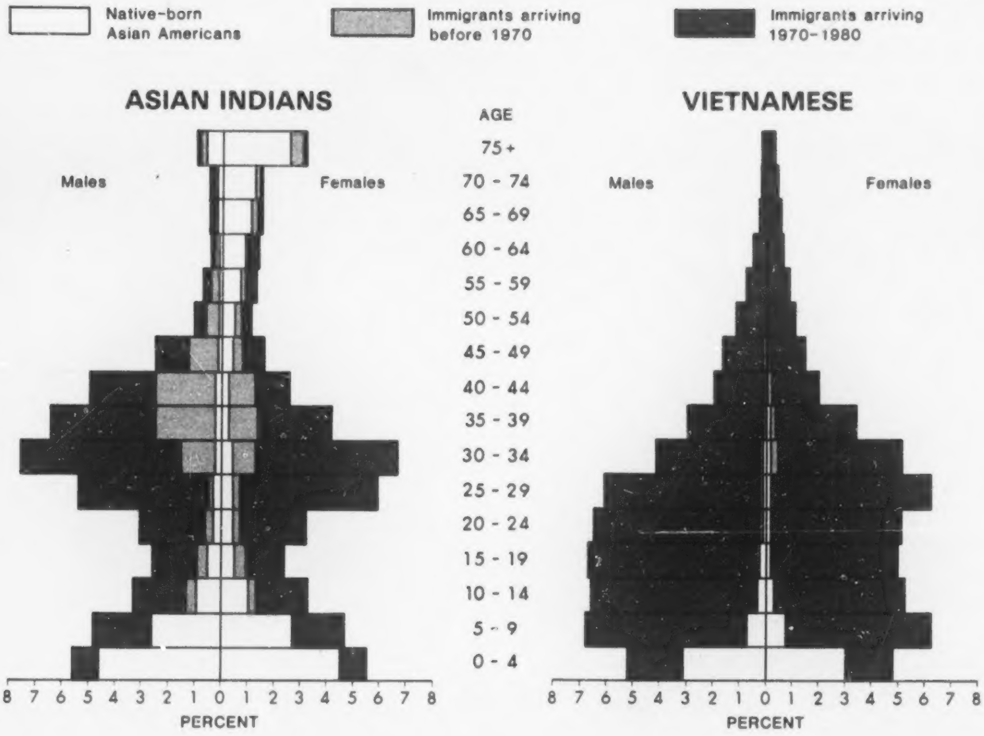
The native-born populations of Japanese, and Chinese to a lesser degree, are comprised of the children of two "waves" of immigration. Each pyramid has notable native-born populations both at older ages (descendants of the earliest immigrants) and younger ages (the children of post-World War II immigrants). However, the Chinese, but not the Japanese, have come in large numbers since 1965. This, combined with fairly low births per woman in both groups, has resulted in a rising number of native-born children ages zero to 14 among Chinese but a falling number for Japanese Americans.

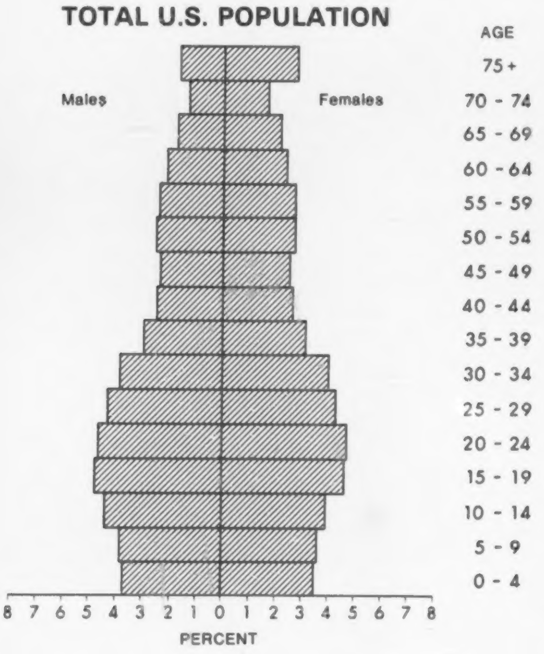
Filipinos and Koreans have also come in two waves, before and after World War II, but their pyramids show little bulge in the native-born at older ages. This is because most of the early Filipino immigrants were unaccompanied males who never married (see the male bulge for early Filipino immigrants at the top of the pyramid). For the Koreans, the pyramid shows—as already noted—that the pre-World War II immigrants were few. Asian Indian and Vietnamese native-born populations are distributed as might be expected of groups with heavy recent immigration which has included relatively large numbers of adults in the child-bearing ages, that is, wide bars of children in the youngest ages. (The apparent large numbers of older native-born Asian

Figure 3. Age-Sex Composition of the Six Major Asian American Groups, by Period of Immigration, and Total U.S. Population: 1980



Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-B1, *General Population Characteristics*, Table 45, and special unpublished tabulations of the Asian American population.





Indian females are the product of an error in the census, we suspect.)

Among the foreign-born, Japanese show the highest proportions of pre-1970 immigrants, clustered at the older ages. Chinese and Filipinos show the effects of their long immigration histories, but with much more evidence of 1970-80 immigration. Pyramids for Koreans and Asian Indians show aging groups of pre-1970 immigrants, heavily female among Koreans and heavily male among Asian Indians.

Koreans and Asian Indians also show high proportions of 1970-80 immigrants but the Vietnamese pyramid is most dominated by the effects of recent immigration. The pyramids of these three groups will be shaped by heavy recent immigration for a long time. But eventually, even if immigration continues at high levels, their pyramids will come to resemble those of the Chinese and Filipinos, with greater proportions of earlier immigrants and native-born.

The large numbers of Vietnamese in or about to enter the prime childbearing ages of the twenties and early thirties portend a large number of Vietnamese births in the near future and a rapid increase in the number of Vietnamese Americans, especially since the birth rate of Vietnamese women is relatively high, as noted later. In addition to the Vietnamese, the broad bases of their pyramids suggest that the number of U.S.-born Filipinos, Koreans, and Asian Indians should grow more rapidly than will native-born Japanese or Chinese.

The Japanese age structure may pose problems for Japanese families in the future. When the relatively small numbers of Japanese Americans who were children and teenagers in 1980 grow older, they may have to support a much larger number of elderly Japanese who were aged 20-34 in 1980. This problem mirrors that of the total U.S. population when the baby-boom generation retires. Moreover, the relationships of native-born children and their elders are not always smooth because of the clash of cultures. Here the situation of Vietnamese is probably the extreme. There may be turbulent times ahead for the families of America's newest Asian arrivals.

Sex differences

In 1980, in the U.S. population as a whole, the median age was higher for females (31.2) than for males (28.8), reflecting the fact that in most populations, women live longer than men (Table 5, page 13). This pattern was true also for the major Asian American groups, except Asian Indians, where the median ages were virtually equal at 30.1 for females and 30.2 for males. However, the female-male differences in median age were 35.9 to 31.0 among Japanese Americans and 27.1 to 23.3 among Korean Americans—gaps much greater than for the U.S. population as a whole in 1980 and in Japan and Korea today. This could be because many of the older Japanese and Korean immigrants now in the U.S. came as wives of American men who served in the armed forces in Asia during and after World War II and the Korean War of 1950-53.

Female-dominant immigration also explains why these two groups have much lower numbers of males per 100 females than the U.S. average. In 1980 the male-female sex ratio was 84.5 for Japanese Americans and 71.5 for Koreans, compared to 94.5 for the U.S. population as a whole. On the other hand, male-dominant immigration, especially in the ten years before the 1980 census, was reflected in the unusual sex ratios of Asian American groups that were above 100: 107.2 for Asian Indians and 107.6 for Vietnamese.

Immigration can have startling effects on the sex ratio of a population. In 1900 the sex ratio for Chinese in the U.S. was 1,385 males per 100 females because Chinese immigration had been so heavily male in the preceding 50 years. Among Filipinos, the sex ratio was still 123.4 in 1970, a lingering result of heavy male immigration early in the century. By 1980, however, many of these elderly single male Filipinos had died and the sex ratio had fallen below 100. As with age structure, sex ratios of Asian Americans will continue to change in the future in response to immigration patterns.

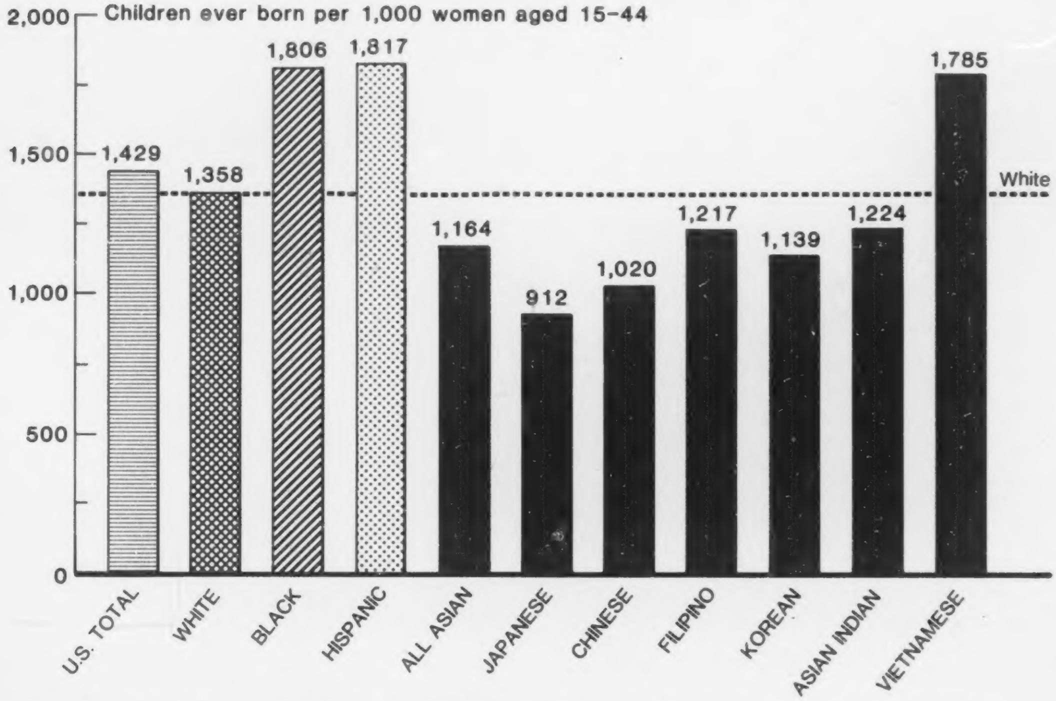
Fertility

Currently it is difficult to calculate the more common fertility rates for Asian Americans because race is defined differently by the registration system which records births and the Census Bureau which counts numbers of women in the childbearing ages. However, some clues on fertility can be gleaned from the census question on the number of children ever born asked of female respondents, which automatically classifies each reported child by the race of the mother.

In contrast to Hispanics, America's other large minority with many recent immigrants, the fertility of most Asian Americans is not high by current American standards. In 1980 the average

Figure 4. Children Ever Born per 1,000 U.S., White, Black, Hispanic, and Asian American Women Aged 15-44; 1980

(Age-standardized rates[a])



Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, March 1984, Tables 84 and 131, and special unpublished tabulations of the Asian American population.

[a]These rates are standardized on the age distribution of all Asian American women in 1980 so that comparisons are not affected by differences in age composition among the different populations.

number of children ever born for all Asian American women aged 15-44 was 1,164 per 1,000 women (Figure 4). This was lower than the figures for women of all races, 1,429, and for whites, 1,358, and far lower than the figures of 1,806 for blacks and 1,817 for Hispanics. (These figures are age-standardized. See note at the bottom of Figure 4.)

Among Asian Americans, the figure was highest for Vietnamese, 1,785, which was close to the figures for Hispanic and black women. All other groups were much lower and below the figures for both U.S. women as a whole and white women: somewhat above 1,200 children per 1,000 women aged 15-44 among Asian Indians and Filipinos, 1,139 for Koreans, 1,020 for Chinese, and just 912 for Japanese American women.

One important factor in explaining differential fertility is place of birth. In the past among ethnic minorities in the U.S., the fertility of the native- or U.S.-born who have become assimilated has tended to resemble that of the white majority and has been lower than that of foreign-born immigrants in these groups.[9] Recent immigrants bring with them the values and behavior of the cultures they left behind, including traditional preferences for large families which are typical in some countries of origin, such as the Philippines and Vietnam, though not Japan. Migrants, however, may have lower fertility than those left behind. Also, a recent study of Indochinese refugees in San Diego county, California, revealed lower fertility among the highly educated, urbanized, and often professional refu-

Table 6. Fertility of U.S. and Asian American Women Aged 25-34, by Nativity and Education: 1980

(Children ever born per 1,000 women)

Mothers' characteristics	Total U.S.	Total Asian[a]	Japanese	Chinese	Filipino	Korean	Asian Indian	Vietnamese
Total	1,476	1,201	908	939	1,270	1,244	1,336	1,775
Nativity								
Native-born	—	951	768	669	1,520	996	1,343	1,608
Foreign-born	—	1,268	1,104	1,024	1,227	1,252	1,336	1,777
Years of schooling								
Less than 9	2,348	2,030	1,119	1,766	1,839	1,246	2,233	2,543
9-12	1,764	1,509	1,342	1,318	1,723	1,288	1,574	1,834
13-16	1,106	992	807	763	1,144	1,186	1,293	1,033
17 or more	620	726	466	538	801	903	1,055	847

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-D1-A, *Detailed Population Characteristics*, March 1984, Table 271, PC80-1-C1, *General Social and Economic Characteristics*, Tables 84 and 131, and special unpublished tabulations of the Asian American population.

[a] Includes all Asian Americans; not just those listed separately.

gees who arrived in the first wave of 1975-77 than among the much more rural farmers and fisherfolk who came in the second refugee wave, generally too late to be counted in the April 1, 1980, census.[10]

Some of these differences are evident in the 1980 census data in Table 6 on children ever born per 1,000 women in the prime childbearing ages of 25-34. The average for the native-born among Asian Americans as a whole, 951, is much lower than the average for the foreign-born, 1,268. The differential is in the same direction for all the major Asian American groups except Filipinos and Asian Indians. Nevertheless, among all groups except Vietnamese, the figures for the foreign-born are still below the figure for all U.S. women, 1,476, and for white women aged 25-34, which was 1,404.

Table 6 also shows fertility by mother's education, another important factor associated with fertility differentials. Typically, the higher a woman's education, the lower her fertility. In 1980 the average number of children per 1,000 U.S. women aged 25-34 with more than four years of college (17 or more years of schooling) was just 620 compared to the average of 2,348 for women with less than nine years of education. Among Asian Americans, only Japanese and Koreans at lower levels of education show any deviation from this usual pattern.

What of future trends in Asian American fertility? The 1980 census data indicate that for all but the most recently arrived group, the Vietnamese, fertility is already below the level for white Americans, but some differences remain among the different groups even after controlling for nativity (whether or not born in the U.S.) and education. These differences might be expected to persist according to unique economic circumstances and cultural values, such as Filipino Catholicism, which might mean slightly higher fertility for Filipinos than other Asian Americans. But all groups should have relatively low fertility because of the continued striving for upward mobility and success that characterizes Asian Americans. This should be true eventually also for the Vietnamese as they become established and assimilated and immigrants make up a smaller proportion of the total Vietnamese population—a proportion that was 91 percent among Vietnamese counted in the 1980 census (see Table 1, page 5). The San Diego study of Indochinese refugees found that fertility did become lower when socioeconomic adaptation was greater; refugees with the highest family income had the lowest fertility since arriving in the U.S.

Mortality and Health

Reliable national data on the health and mortality of Asian Americans as a whole are difficult to obtain because of problems of relating vital statistics and census data with different rules for defining race and because the groups are still too small to yield statistically reliable data in national sample surveys. But evidence from specialized surveys indicates that Asian Americans' health and mortality levels rapidly approach those of the general population as the groups assimilate and that life expectancy for the long-established Japanese and Chinese is higher than for white Americans.

Life expectancy

A long series of data from Hawaii, where Asians now comprise nearly half the population, shows that in 1920, Japanese, Chinese, and Filipinos had lower life expectancy than whites, but Japanese and Chinese life expectancy surpassed that of whites by 1940, an achievement also recorded for Filipinos, though not till 1980 (Table 7). In 1980 life expectancy at birth was highest for Chinese in Hawaii, 80.2 years, followed by Japanese, 79.7, Filipinos, 78.8, and whites, 76.4.

Table 7. Life Expectancy at Birth of Whites, Japanese, Chinese, and Filipinos: Hawaii, 1920-1980; California and U.S., 1960

(Combined sexes)

Year	White	Japanese	Chinese	Filipino
		Hawaii		
1920	56.5	50.5	53.8	28.1
1930	61.9	60.1	60.1	46.1
1940	64.0	66.3	65.3	56.9
1950	69.2	72.6	69.7	69.1
1960	72.8	75.7	74.1	71.5
1970	73.2	77.4	76.1	72.6
1980	76.4	79.7	80.2	78.8
		California		
1960	71.3[a]	77.9[a]	72.9[a]	—
		United States		
1960	71.2[a]	77.4[a]	—	—

Sources: Hawaii: Robert W. Gardner, "Life Tables by Ethnic Group for Hawaii, 1980," *Research and Statistics Reports*, No. 43 (Honolulu: Hawaii State Department of Health, 1984). California: H. H. Hechter and N. O. Borhani, "Longevity in Racial Groups Differs," *California's Health*, Vol. 22, No. 15 (February 1965) pp. 121-122. United States: Evelyn M. Kitagawa and Philip M. Hauser, *Differantial Mortality in the United States: A Study in Socioeconomic Epidemiology* (Cambridge, Mass.: Harvard University Press, 1973).

[a] Simple average of male and female expectancies.

In 1960 in California, Japanese life expectancy was estimated to be 77.9 years, slightly higher than in Hawaii in 1960, 75.7, and also higher than for Chinese and whites (Table 7). Centered also on 1960, a classic study of differential mortality by University of Chicago demographers Evelyn Kitagawa and Philip Hauser—the only truly national study of mortality to include data on Asian Americans—also found life expectancy highest for Japanese—77.4 years for males and females combined, versus 71.2 for whites (Table 7). Among males, the figures were 74 for Japanese versus 68 for whites, and among females, 80 for Japanese and 75 for whites. Kitagawa and Hauser remarked of their study: "Perhaps the most striking finding is the very low mortality of the Japanese,"[11] which was about one-third below that of whites at all ages. Among Chinese, male mortality for ages over five was 10 percent above that of whites, but for females it was about 9 percent lower. (Chinese numbers in 1960 were too small to make other comparisons.) Using 1980 data from the National Center for Health Statistics (NCHS), researchers at the University of Illinois have also found unadjusted age-specific death rates for Japanese and Chinese lower than those for whites at all ages, with Japanese rates generally also lower than those of Chinese.[12]

Infant mortality and health

The latest NCHS data on infant mortality, for 1982, show Japanese at the extremely low rate of 4.6 deaths under one year of age per 1,000 live births, Filipinos at 5.8, and Chinese at 6.1—all far below the mortality rate for white infants in 1982, 10.1, and for the total population, 11.5.[13] These figures could be somewhat misleading; several studies have shown that Asian American and Native American (Indian) infant mortality tends to be understated because of problems with classification by race. A study of California data for 1965-67, for example, found Japanese infant mortality rates 22 percent higher after adjustment for classification errors and higher than the rates for white infants.[14] Chinese rates also rose with adjustment, but remained lower than the white rates.

Asian Americans also do well on indicators of infant health. In 1982 the percentage of babies weighing less than 2,500 grams (about 5.5 pounds) at birth—a low birth weight frequently associated with health problems—was 5.3 percent for Chinese newborns, which was below the averages for whites, 5.6 percent, and for all births, 6.8 percent.[15] The Japanese figure, 6.2 percent, was also lower than the national average and the Filipino figure was almost the same at 6.9 percent. A summary measure of a baby's physical condition five minutes after birth (the Apgar score) showed Japanese, Chinese, and Filipino newborns all with better scores than whites in 1982.

Reasons for mortality differentials

Kitagawa and Hauser and many other researchers have found that economic status is a major factor in determining mortality levels. Japanese and Chinese per capita incomes are higher than the white average, as noted later, and this is part of the reason for their lower mortality, while Filipino per capita income is somewhat lower than the white average and their mortality and health are closer to white levels. The Hawaii data also suggest that newly arrived immigrant groups starting off at the bottom of the socioeconomic ladder, as were Filipinos in Hawaii 60 years ago and "second-wave" Vietnamese refugees today, have relatively high mortality, but health and life expectancy improve as their economic conditions improve and more of their populations are composed of the native-born.

Other factors that influence Asian Americans' mortality are associated with assimilation. Typically, the mortality rates for different diseases recorded for Japanese, Chinese, and Filipinos in the U.S. show a movement away from the levels in their countries of origin toward the levels of whites in the U.S.[16] For example, in 1959-62, the Japanese American death rate for coronary heart disease was higher than the rate in Japan but lower than the rate for whites in the U.S., while their death rate from stroke was about the same as that of white Americans and much lower than the rate in Japan.

The pattern for death rates from stroke may be due to a change in diet among Japanese Americans away from the heavy use of sodium, which is traditional in the Japanese diet and a cause for the high levels of stroke in Japan, toward a diet closer to that of the rest of Americans. Researchers Michael Marmot and Leonard Syme found in 1976 that other indicators of assimilation—use of language, ethnicity of associates, religion, etc.—were associated with a steep rise in heart disease mortality rates from low in Japan, to higher among Japanese in Hawaii, and highest among Japanese Americans in California, and also a rise between traditional and nontraditional Japanese in San Francisco.[17]

Families and Households

Economically and socially Asian Americans as a whole are faring well, but the popular notion of a highly successful "model minority" applies much more to some Asian American groups than to others. Adjustment problems can be severe and poverty is high among some of the most recent arrivals from Asia, par-

Table 8. Household Composition of White, Black, Hispanic, and Asian American Populations: 1980

Household indicator	White	Black	Hispanic	Japanese	Chinese	Filipino	Korean	Asian Indian	Vietnamese
Householders by type (percent)									
Family householders, male	63.4	42.7	63.4	60.7	68.0	70.9	72.0	66.7	69.5
Family householders, female	10.1	29.8	18.1	10.1	11.1	12.3	11.2	6.4	14.2
Nonfamily householders	26.5	27.5	18.5	29.2	20.9	16.8	16.8	26.9	16.3
Household members by relationship to householder (percent)									
Householder	37.4	32.8	28.0	34.0	31.8	26.4	23.2	35.0	21.0
Spouse	23.6	13.2	17.5	27.6	21.9	21.1	26.4	23.8	16.5
Child	33.1	41.1	43.9	30.0	34.7	37.3	42.0	32.5	42.2
Other relative	3.3	9.5	7.2	4.8	7.9	11.6	6.2	6.5	14.3
Not related	2.6	3.4	3.4	3.6	3.7	3.6	2.2	2.3	6.0
Average persons per household	2.7	3.1	3.5	2.7	3.1	3.6	3.4	2.9	4.4
Children under 18 living with two parents (percent)	82.9	45.4	70.9	87.3	88.2	84.5	89.4	92.7	74.1

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 121, 131, and 160, and special unpublished tabulations of the Asian American population.

ticularly Vietnamese refugees.

Recent immigrants of Asian origin are making the economic adjustment to life in the U.S. in part by depending on strong family support. As historian David Bell puts it: "All the various explanations of the Asian Americans' success tend to fall into one category: self-sufficiency. The first element of this self-sufficiency is family."[18] The stability of the family among Asian Americans, he says, "contributes to success in at least three ways. First, it provides a secure environment for children. Second, it pushes those children to do better than their parents. . . . And, finally, it is a significant financial advantage."

It is common within Asian American families to pool resources for housing, schooling, and other needs, particularly in the first years in the U.S. This pattern of adjustment is reflected in census data which show that the households of the most recently arrived immigrants include much higher proportions of relatives other than the householder's spouse and children than do the households of Asian Americans in general. Thus, household composition varies among the different Asian American ethnic groups according to their histories of immigration and adaptation, as well as their childbearing behavior and distinct cultural backgrounds.

Data from the 1980 census show that Japanese American households as a whole are small—identical in average size to white households at 2.7 persons (Table 8). Only 30 percent of Japanese American household members are children of the householder, compared to 33 percent for whites, and just 8.4 percent are either relatives other than the householder's spouse and children or persons unrelated to the householder—slightly higher than the 5.9 percent for white households. Chinese households are similar in their small size and simple composition, but almost 12 percent of household members are relatives outside the immediate family or persons unrelated to the householder. The households of Asian Indians are also comparatively small, 2.9 persons on average.

Korean households are somewhat larger, 3.4 persons on average, mainly because they contain more children. Filipino households are larger still; there are more relatives of the householder as well as more children. Vietnamese households are the largest at 4.4 persons on average. The proportion of other relatives and nonrelated persons, 20 percent, is the highest of that of any of the six major Asian American groups, and the number of children per household is high as well.

The stability of Asian American families is reflected in the 1980 census data on the proportion of households headed by females and the proportion of children living with two parents. The proportion of female-headed households is lowest among Asian Indians, just 6 percent, and highest among Vietnamese, 14 percent (Table 8). These figures range close to the proportion for white households, 10 percent, and are all below the proportion for Hispanic households, 18 percent, and far below the proportion of female-headed households among blacks, 30 percent. Also, a greater share of the children in each Asian American group lives with two parents than is true for Hispanics, blacks, or even whites. The share is below that of the white population, 83 percent, only among Vietnamese, 74 percent. For Asian Indians, the share is more than twice that of the black population, 93 compared to 45 percent. Eighty-nine percent of Korean children, 88 percent of Chinese children, and 87 percent of Japanese children live with two parents.

Figures on the proportion of all households that contain people living alone or with unrelated individuals rather than families also suggest that family fragmentation has not touched some Asian groups as much as it has whites and blacks in America. In 1980, 28 percent of black households and 27 percent of white households were nonfamily households, but this figure was only 16 percent for Vietnamese, 17 percent for Koreans and Filipinos, and 21 percent for Chinese (Table 8). The proportions were at or higher than the white and black averages for Japanese, 29 percent, and Asian Indians, 27 percent. Among Japanese this probably reflects a relatively high proportion of elderly people, many of whom live alone as widows or widowers, while for Asian Indians it may represent working-age people who have come to the U.S. without their families.

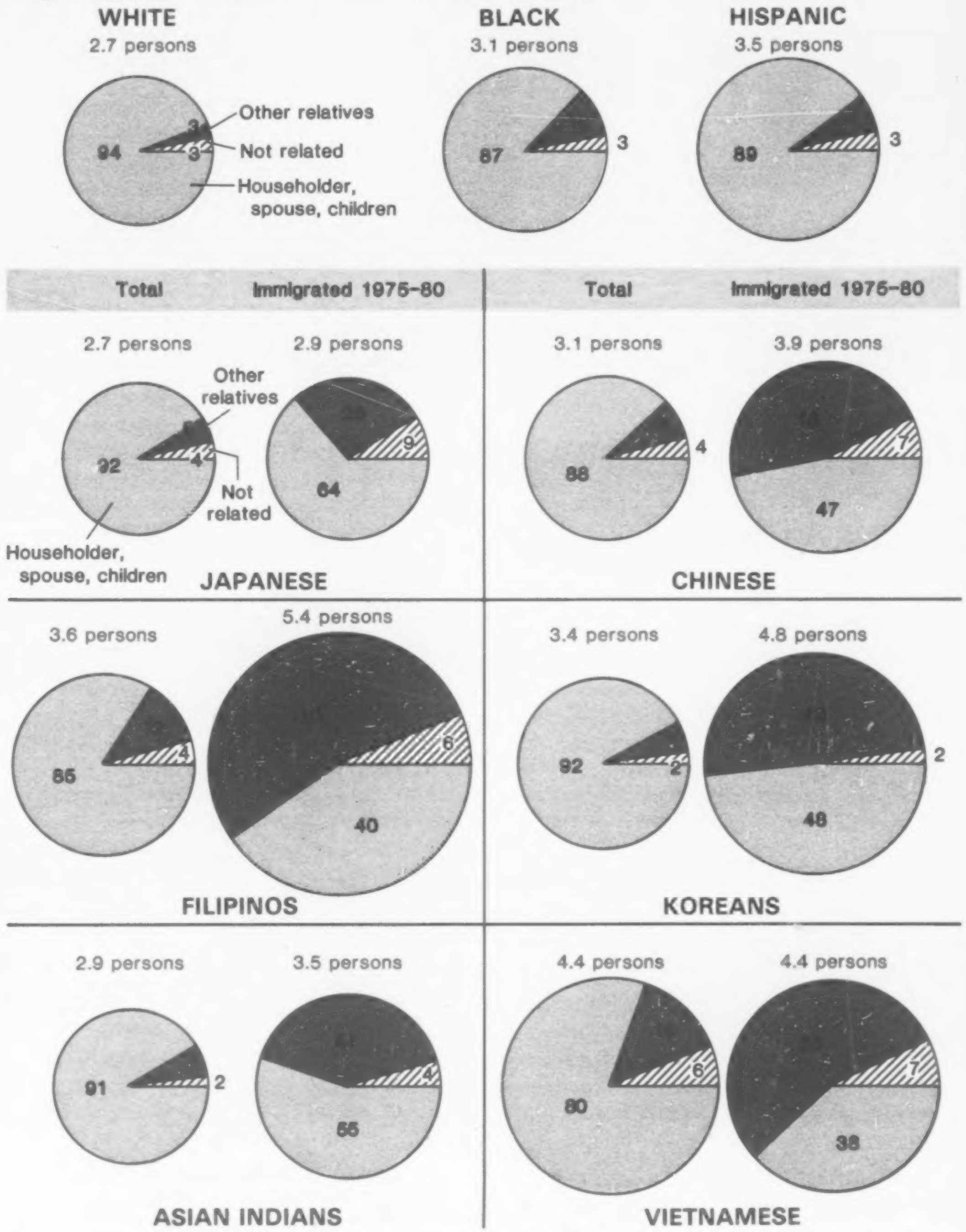
Households of recent immigrants

The household patterns of recent immigrants in the different Asian ethnic groups reflect both cultural preferences and the strategies they adopt to make the economic adjustment to life in the U.S. In all groups, the households of immigrants who came to the U.S. in the five years before the 1980 census, 1975-80, contain much higher proportions of "other relatives" than is true for the groups taken as a whole. These differences are much larger than any other differences in household composition among the six groups. They explain why the households of these recent immigrants are larger than those of the Asian American groups as a whole, except among Vietnamese (where the averages are both 4.4 persons), and often larger than the average even for Hispanic households in 1980, 3.5 persons (Figure 5). This is true even though these households are formed by young couples at such an early stage of their childbearing years that they have from one-half to nearly one full child less, on average, than Asian American households in general.

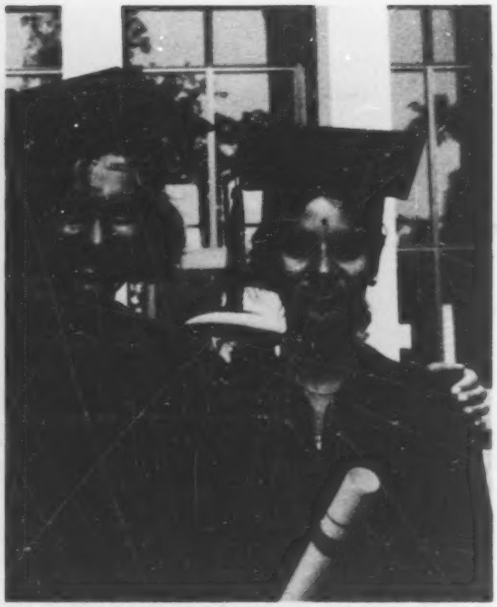
In the households of Korean immigrants arriving between 1975 and 1980, other relatives beyond the householder's immediate family made up 49 percent of household members in 1980, versus just 6 percent among Korean American households as a whole (Figure 5). The pattern was the same for all the other groups: 28 versus 5 percent for Japanese; 46 versus 8 percent for Chinese; 54 versus 12 percent for Filipinos; 41 versus 7 percent for Asian Indians; and 55 versus 14 percent for Vietnamese.

It is likely that these "other relatives," members of the householder's extended family, provide additional workers to help boost family income or cushion the loss of income if a family worker loses a job, as well as make it possible to share child

Figure 5. Household Size and Composition of White, Black, Hispanic, and Asian American Total and Recent Immigrant Populations: 1980 (Numbers in percent)



Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 121 and 131, and special unpublished tabulations of the Asian American population.



Fifty-two percent of adult Asian Indians in the U.S. are college graduates.

care and the cost of rents or mortgages. Studies have shown that this has been the strategy of the latest arrivals among Koreans in Chicago, Chinese in Washington, D.C., Filipinos in Honolulu, and Indochinese in several large cities.[19] Because many Asian American groups include a high proportion of recent immigrants, their household composition is different from that of white Americans. In 1980, even among the longest established Chinese and Japanese Americans, "other relatives" made up 8 and 5 percent of household members for the groups as a whole, compared to just 3 percent in white households. For Vietnamese, with the highest proportion of recent arrivals, the figure was 14 percent—higher than the 10 percent among blacks and 7 percent among Hispanics. It will be interesting to see from the 1990 census if Asian Americans' household patterns have drawn closer to the white pattern as their adaptation continues.

Education

Perhaps the most remarkable—and certainly the best publicized—characteristic of Asian Americans is their exceptional performance in the nation's schools and colleges. Ambitious Asian Americans are outperforming all other groups in education, the traditional American gateway to success. The media hail their feats: highest average scores of any ethnic group, including whites, on the math section of the Scholastic Aptitude Test for college entrance; nine of the 40 semifinalists in the Westinghouse Science Talent Search among highschoolers in 1984 and seven in 1985; 11 percent of Harvard's entering freshman class in 1984, 9 percent at Princeton, and 19 percent at the University of California at Berkeley and at Cal Tech.[20] The 1980 census recorded that 35 percent of adults age 25 and older in the six main Asian American groups had graduated from college, more than double the 17 percent of white adults.[21] An amazing 52 percent of adult Asian Indians in the U.S. are college graduates and more than one-third of Chinese and Filipinos. Census figures on high school completion and school enrollment also demonstrate Asian Americans' extraordinary commitment to economic advancement through education.

High school completion

The percentages of high school graduates among men and women aged 45-54 and those aged 25-29 in 1980 portray the educational progress that has been made in this century (Table 9). For example, among white men, the proportions who had completed high school were 69 percent in the older group and 87 percent in the younger group, and among black men the proportions rose from 43 percent to 74 percent.

Asian Americans as a whole were already at high school completion levels close to those of whites in the past, and more recently they have levels well above those of whites. Among the Japanese, for example, 88 percent of men aged 45-54 in 1980 had completed high school and the proportion was an even more impressive 96 percent for men

Table 9. High School Graduates Among White, Black, Hispanic, and Asian American Adults: 1980

(Percent of persons aged 25-29 and 45-54 who had completed high school)

Population	Male		Female		Male-female difference (percentage points)	
	25-29	45-54	25-29	45-54	25-29	45-54
White	87.0	68.7	87.2	70.1	−0.2	−1.4
Black	73.8	42.9	76.5	45.9	−2.7	−3.0
Hispanic	58.4	38.4	59.2	35.5	−0.8	−2.9
Japanese	96.4	88.1	96.3	82.5	0.1	5.6
Chinese	90.2	68.7	87.4	57.7	2.8	11.0
Filipino	88.8	79.6	85.0	71.3	3.8	8.3
Korean	93.5	90.4	79.0	68.5	14.5	21.9
Asian Indian	93.5	86.1	87.9	62.0	5.6	24.1
Vietnamese	75.5	63.6	63.4	41.4	12.1	22.2

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-D1-A, *Detailed Population Characteristics*, Table 262, and special unpublished tabulations of the Asian American population.

aged 25-29 in 1980. All the Asian American groups of men, except the Vietnamese, had high school completion rates at least as high or higher than whites among both the older and the younger groups. Compared to the white figure of 87 percent for men aged 25-29 in 1980, for example, the figures were 94 percent for Koreans and Asian Indians, 90 percent for Chinese, and 89 percent for Filipinos.

Another Asian American educational achievement is the narrowing of the gap between men and women in high school graduation. Korean and Vietnamese women aged 25-29 in 1980 still lagged well behind men, but for the other Asian American groups the male-female difference in high school completion approached that of whites—where women had a slight edge in this age group. The male-female difference was 5.6 percentage points for Asian Indians, 3.8 for Filipinos, 2.8 for Chinese, and virtually nil for Japanese (Table 9, second last column).

Of course, many Asian Americans are immigrants who received their schooling before they came to the U.S.; others immigrated to the U.S. with further schooling as an objective. U.S. census data alone are not enough to distinguish educational attainment among Asian Americans born in the U.S., those born abroad who completed their education in the U.S., and those both born and educated abroad. However, some idea of these differences can be gleaned from information from censuses in immigrants' home countries combined with U.S. census data.

We have done this for Filipinos and Koreans, two of the main immigrant groups. Table 10 shows the percentages who had completed high school among persons aged 25-29 as recorded in the 1980 censuses of both the U.S. and the origin countries. For immigrants enumerated in the U.S. census, we also have a breakdown by period of immigration: 1975-80 and 1960 or earlier. Most of those aged 25-29 who immigrated to the U.S. between 1975 and 1980 are likely to have completed high school before immigrating. Those who immigrated before 1960 were under age 10 at the time and if they finished high school, they must have done so in the U.S.

As expected, all men and women aged 25-29 in 1980 who had migrated from the Philippines or Korea to the U.S. were much better educated than those in the same age group who remained behind—by a wide margin. More remarkably, those who left in 1975-80 at age 20 or older, after their high school years, gen-

Table 10. High School Graduates Among Filipinos and Koreans Aged 25-29 in 1980, by Birthplace, Residence, and Period of Immigration

(Percent of persons who had completed high school)

Population	Male	Female
Filipinos/Philippines		
In Philippines in 1980	27.1	23.9
In the U.S. in 1980		
Born in the U.S.	89.7	90.0
Born in the Philippines		
Immigrated 1975-80 at ages 20-29	84.9	84.9
Immigrated 1960 or before at ages under 10	87.5	87.1
Koreans/Korea		
In Korea in 1980	53.7	36.1
In the U.S. in 1980		
Born in the U.S.	93.3	80.2
Born in Korea		
Immigrated 1975-80 at ages 20-29	93.6	70.6
Immigrated 1960 or before at ages under 10	99.9	92.9

Sources: U.S. data: Bureau of the Census, tabulations of the foreign-born population by country of birth, 1984, unpublished, and special unpublished tabulations of the Asian American population. Philippines and Korea data: 1980 census national summary tables.

erally had nearly as high a proportion who had completed high school as did Filipinos or Koreans who immigrated before age 10 or those born in the U.S. This pattern could well be true of other recent Asian American immigrants (except the second wave of less educated Indochinese refugees). If so, it means this country is receiving the best educated people of the sending countries and their inclusion in the U.S. population will help boost national educational levels. This pattern is the reverse of that for recent Hispanic adult immigrants and for European adult immigrants of the past and Asian immigrants of the 19th and early 20th centuries, who arrived with much less education than U.S. residents, on average.[22]

School enrollment

Every Asian American group has impressive school enrollment rates relative to U.S. whites as well as to blacks and Hispanics, according to the 1980 census (Table 11). By the later high school years, at ages 16 and 17, all Asian Americans are more likely than white Americans to be enrolled in school. While 89 percent of the white population aged 16 and 17 was in school in 1980, 96 percent of Japanese and Chinese American boys and girls of this age were enrolled, 95 percent of Koreans, and at least 90 percent of the other three major Asian groups.

By the years of college and graduate study, ages 20-24, the Asian American enrollment edge is far greater. Twenty-four percent of whites aged 20-24 were enrolled in school in 1980, but the proportions were 48 percent for Japanese and 60 percent for Chinese. At least 40 percent of Koreans, Asian Indians, and Vietnamese of this age were enrolled and even Filipinos, the Asian group with the lowest rate, 27 percent, were three percentage points ahead of whites.

It might be supposed that one reason for Asian Americans' high enrollment rates at ages 20-24 is the fact that many Asians come to the U.S. in order to study, particularly at college undergraduate and graduate levels, planning to return home after graduation, but in the meantime they are counted by the census as being residents of the U.S. and enrolled in school. However, our data indicate that enrollment rates for native-born Asian Americans aged 20-24 are also generally higher than that for whites of the same ages.[23]

Why are Asians able to do so well in school? Academic researchers and news reports suggest that the answer is strong parental pressure and support and a level of discipline that other ethnic groups lack. Asia expert John Whitmore of the University of Michigan observed to *U.S. News & World Report:* "If an Ameri-

Table 11. School Enrollment of Whites, Blacks, Hispanics, and Asian Americans Aged 16-17 and 20-24: 1980

Population	Percent enrolled in school	
	Aged 16-17	Aged 20-24
White	89.0	23.9
Black	87.9	21.1
Hispanic	80.2	18.2
Japanese	96.2	48.0
Chinese	96.0	59.8
Filipino	92.8	27.1
Korean	94.9	40.1
Asian Indian	92.2	44.5
Vietnamese	90.2	41.8

Source: Bureau of the Census, *1980 Census of Population,* PC80-1-C1, *General Social and Economic Characteristics,* Tables 123, 133, and 160.

can child isn't doing well in school, his parents think the teacher or school has failed or the student just doesn't have it. The Asian parent's view is that the student isn't trying hard enough. Put shoulder to wheel, and there will be a payoff."[24]

Reporting "remarkably" high school marks of children in a nationwide sample of 1,400 Southeast Asian refugee households that were followed for three years, psychologist Nathan Caplan, also of the University of Michigan, noted that the survey parents spent many evenings reading to their children in English or their native tongue to boost classroom achievement.[25]

Asian Americans' educational success is raising new questions for academia. Some top universities have reportedly adopted unofficial admission quotas for Asian Americans to dampen their disproportionately high representation in undergraduate student bodies.[26] This possibility alarms the Asian American community, of course, but it should be alarming to all Americans, whether or not it reaches the point of affecting Asian American educational performance. Universities that deny admission to qualified students simply because of Asian heritage are practicing a new kind of anti-Asian discrimination. In other forms, this discrimination has persisted since the arrival of the first Chinese laborers more than a century ago.

Whatever the obstacles, Asian Americans are likely to continue their remarkable educational record. This in turn means they should advance rapidly in income and occupational status in the coming years.

Asian Americans at Work

According to the 1980 census, Asian American men and women in almost all cases have labor force participation rates as high or higher than those of white men and women. In the week before the April 1 census, the percentage of white men age 16 and over who were working or looking for work (the labor force participation rate) was 76 percent. The rate for Asian American men was at least this high—and as high as 84 percent for Asian Indians—for all but Chinese, 74 percent, and Vietnamese, 65 percent.[27] For white women, the rate was 49 percent. Asian Indian women were one point below this, 47 percent, and Vietnamese women were the same, but the rate was much higher in the other four major groups: 55 percent for Korean women, 58 percent for Chinese, 59 percent for Japanese, and highest for Filipino women at 68 percent.

For Asian Americans, however, work force participation in 1980 varied with their immigration history and command of English. These differences were most apparent among women.

Labor force participation variations among women

Asian American women's labor force participation rates varied somewhat according to their family situation, although a majority in all categories were in the labor force (top panel of Table 12, page 28). Filipino women's rates were highest in virtually all these categories. This

Filipino women have the highest labor force participation rates of Asian American women.

could be because of Filipino families' particular need for workers; as noted later, Filipinos earned less than all but Vietnamese among full-time Asian American workers in 1979. Wives living with their husbands in 1980 (female spouses) were somewhat less likely to be working or looking for work than women recorded as female householders. Like American women in general, Asian American women's labor force participation is high even when they have children under 18 living at home.

Except among Asian Indians and Filipinos, native-born Asian American women are more likely to be in the labor force than the foreign-born, and women who were "abroad in 1975" (mainly post-1975 immigrants) had lower labor force participation rates than the foreign-born as a whole (middle panel of Table 12). For example, a high 68 percent of Japanese American women born in the U.S. were in the labor force in 1980, versus only 43 percent of those born abroad. For Asian Indian women, however, the rates were 29 percent for the native-born and 54 percent for the foreign-born, and for Filipino women, 65 percent for the native-born and 69 percent for the foreign-born. Many Asian Indian and Filipino women may have come to the U.S. to find work or expecting that it would be necessary to take a job, whereas relatively more of the Japanese, Chinese, and Korean immigrants have come as nonworking wives and have not

Table 12. Asian American Women's Labor Force Participation, by Family Situation, Nativity, and English Proficiency: 1980

(Percent of women age 16 and over who worked or looked for work in week before 1980 census)

Characteristics	Japanese	Chinese	Filipino	Korean	Asian Indian	Vietnamese
Female family householders	72.5	70.3	79.0	71.1	58.2	56.0
Female spouses of householders	55.9	61.2	71.9	56.2	51.9	52.7
In families with own children under 18	76.6	75.4	78.3	71.2	73.1	53.5
Female householders with no husband present	72.7	69.8	78.5	72.9	57.3	57.6
With own children under 18	77.8	76.3	77.2	73.6	74.9	56.6
Native-born	68.3	65.0	64.5	59.1	29.4	56.1
Foreign-born	42.7	56.0	68.8	54.8	53.6	48.7
Abroad in 1975	26.0	46.9	60.5	50.9	51.6	44.1
Speaks only English at home[a]	71.8	67.8	67.3	59.7	36.0	56.0
Speaks another language at home[a]	48.2	57.9	70.3	55.8	53.6	50.2
Speaks English "not well" or "not at all"	26.8	48.5	32.2	50.5	30.9	34.1

Source: Bureau of Census, special unpublished tabulations of the Asian American population.

[a] Data only for women age 18 and over.

yet attained the high labor force participation rates of their native-born counterparts. The relatively low labor force particpation rates of Vietnamese women reflect the fact that so many of them are post-1975 refugees who arrived particularly unprepared for the U.S. labor market.

The greatest differences in labor force participation reflect English-language ability. As might be expected, Asian American women who speak little English are much less likely to be in the labor force than those whose English is better. This difference is true of both men and women, although men's labor force participation rates were higher than women's in all cases in 1980. Of Japanese women who responded to the 1980 census that they spoke English "not well" or "not at all," only 27 percent were in the labor force, compared to 72 percent who spoke only English at home (bottom panel, Table 12). The differences were less for women of other Asian groups, but the substantial gaps suggest that not being able to communicate in English is among the greatest obstacles for Asian American immigrants and their descendants, as it has been for other immigrant groups in the past.

Unemployment

To judge from 1980 census data, unemployment rates of Asian American workers are generally below the rate for white Americans and far below the rate for blacks. The unemployment rate in the week before the census was 5.8 percent for white workers age 16 and over (men and women combined). The rates were at or below this level for workers in all the major Asian American groups except, as might be expected, Vietnamese, and even the Vietnamese unemployment rate of 8.2 percent was well below the black rate of 11.8 percent.[28]

Foreign-born Japanese, Chinese, Koreans, and Vietnamese had higher unemployment rates than their native-born counterparts, but the reverse was true for Filipinos and Asian Indians. For all but Japanese, jobless rates were higher among Asians who had immigrated after 1975 than they were for immigrants who had come earlier. However, even the highest unemployment rate among recent Asian immigrants—8.6 percent for Vietnamese—was substantially lower than the black rate.

Immigrant men's employment

On average, Asian American men immigrating to the U.S. clearly go through a period of struggle to establish themselves in a full-time job. While nearly all the foreign-born men of each Asian American group who were ready to work did so at some time during 1979 (the year measured for this information in the 1980 census), the share who worked for 50-52 weeks was much lower, and lower still for those who worked full-time throughout the year (Table 13, page 30).

For example, 98 percent of Chinese American men born in Taiwan or Hong Kong who wanted to work did work at some point in 1979, but only 55 percent worked for 50-52 weeks—a proportion lower than the comparable figure for white men, 67 percent, and for Hispanic men, 57 percent, and the same as the figure for black men. Just 48 percent of these Chinese American men worked full-time, all year round. The pattern was worse for Vietnamese and best for Asian Indians, but even among men born in India, only 67 percent worked full-time, year round.

Unemployment at some time during 1979 was relatively high among immigrant Asian American men, ranging from 14 percent of men born in Japan or India to 33 percent of the Vietnamese, who were primarily refugees newly arrived in America. About one in five men born in Taiwan, Hong Kong, the Philippines, or Korea faced unemployment at some point in 1979. This was below the 1979 unemployment rates for Hispanic men, 24 percent, and black men, 26 percent, but higher than the rate for white men, 17 percent.

Table 13. Employment Situation of White, Black, Hispanic, and Foreign-Born Asian American Men in 1979

Population	Percent of those in labor force who worked in 1979			Men in labor force who had some unemployment in 1979	
		Worked 50-52 weeks	Worked full-time for 50-52 weeks	Percent	Average weeks of unemployment
White	99.0	67.1	63.1	16.7	13.9
Black	95.5	55.4	51.3	26.1	17.8
Hispanic	97.6	57.0	54.0	23.9	14.4
Foreign-born Asian American men by country of birth					
Japan	98.9	64.1	59.2	13.5	11.7
Taiwan or Hong Kong	98.1	54.9	48.0	19.2	11.8
Philippines	98.1	59.8	56.3	18.9	13.3
Korea	98.7	54.6	50.2	21.4	10.6
India	99.0	70.0	67.0	14.4	11.5
Vietnam	93.4	46.7	43.1	32.6	13.5

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 127 and 137, and unpublished tabulations of the foreign-born by place of birth.

The number of weeks the unemployed foreign-born Asian American men were out of work ranged from 11 to 14 weeks, an average of one-fifth to more than one-quarter of the entire year. For men who are the family's chief breadwinner, these statistics suggest a serious unemployment problem unrevealed by their general labor force participation averages.

Occupation

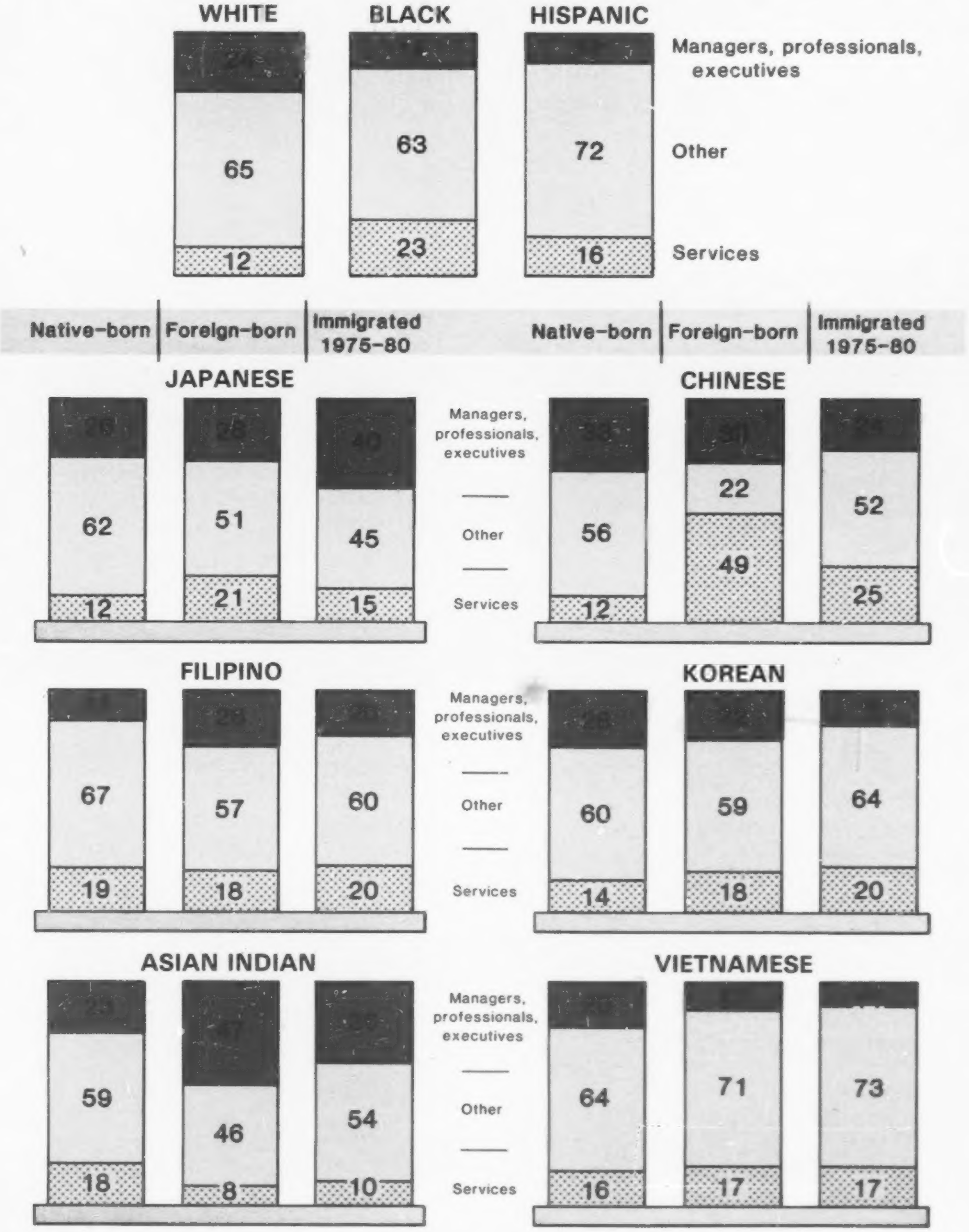
Native-born Asian Americans work in much the same occupations as white Americans. However, Asian American immigrants, the foreign-born, have a different pattern. Like other minorities and immigrants before them, they are found disproportionately in the low-paying service occupations. But they are also concentrated at the top of the occupational hierarchy in professional, managerial, and executive positions.[29]

For example, in 1980, 24 percent of employed white Americans (men and women combined) held jobs as managers, professionals, or executives, but the proportion of foreign-born Asian Americans in this high-status category was 26 percent for Filipinos, 28 percent for Japanese, 30 percent for Chinese, and an amazing 47 percent for Asian Indians (Figure 6). Only among foreign-born Koreans and Vietnamese were the figures lower than for whites. For Koreans, the explanation is that many have gone instead into commercial occupations—the well-known greengrocers of New York City and Los Angeles, for example. Koreans operate about 1,000 of New York City's 1,200 independent grocery stores.[30] For Vietnamese, the explanation is that most of the foreign-born came as refugees who, except for the first wave of 1975-77, generally were less educated farmers, fisherfolk, and laborers speaking little English. Except for the Vietnamese, the proportions of Asian American immigrants working as managers, professionals, or executives in 1980 were all far higher than the figures of just 14 percent for blacks and 12 percent for Hispanics.

The most recently arrived immigrants who came in the five years before the 1980 census were somewhat less likely to be ranked at the top of the occupational ladder than the total immigrant populations, except among Japanese. This reflects the fact that newly arrived immigrants often must first take jobs for which they are overqualified. Lucie

Figure 6. Occupational Status of White, Black, Hispanic, and Asian American Native-Born and Immigrant Workers: 1980

(Numbers in percent)



Sources: Bureau of the census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 89 and 135, and special unpublished tabulations of the Asian American population.

Japanese Americans born abroad, as well as Filipinos and Asian Indians, are more likely than both their U.S.-born counterparts and white Americans to work in the top-ranked occupations.

Cheng, director of the Asian American Studies Center at the University of California, Los Angeles, found, for example, that newly arrived Asian American physicians, pharmacists, and nurses in California frequently worked as interns, assistants, and laboratory technicians.[31] This was because of language problems, differing professional standards in the U.S., and also some discrimination.

Among Japanese, Filipino, and Asian Indian immigrants, the proportions in the highest occupational category in 1980 not only exceeded the white figure but also the proportions for the U.S.-born workers in these groups. For most recent Asian immigrants, the old U.S. image of immigrants filling only the lowest rungs on the occupational ladder no longer applies.

The success of Asian American immigrants at moving beyond low-paying occupations to better-paying high-status jobs is likely to provoke objections among black leaders, who may see the black population once again being left behind.[32] In 1980 the proportion of black workers in service jobs, 23 percent, was nearly three times that of Asian Indians born abroad, 8 percent, and above that of Chinese foreign-born, 22 percent, which was the highest figure in service jobs among foreign-born Asians. Asian Americans' occupational gains will not come without inviting the resentment of groups that have not been so successful.

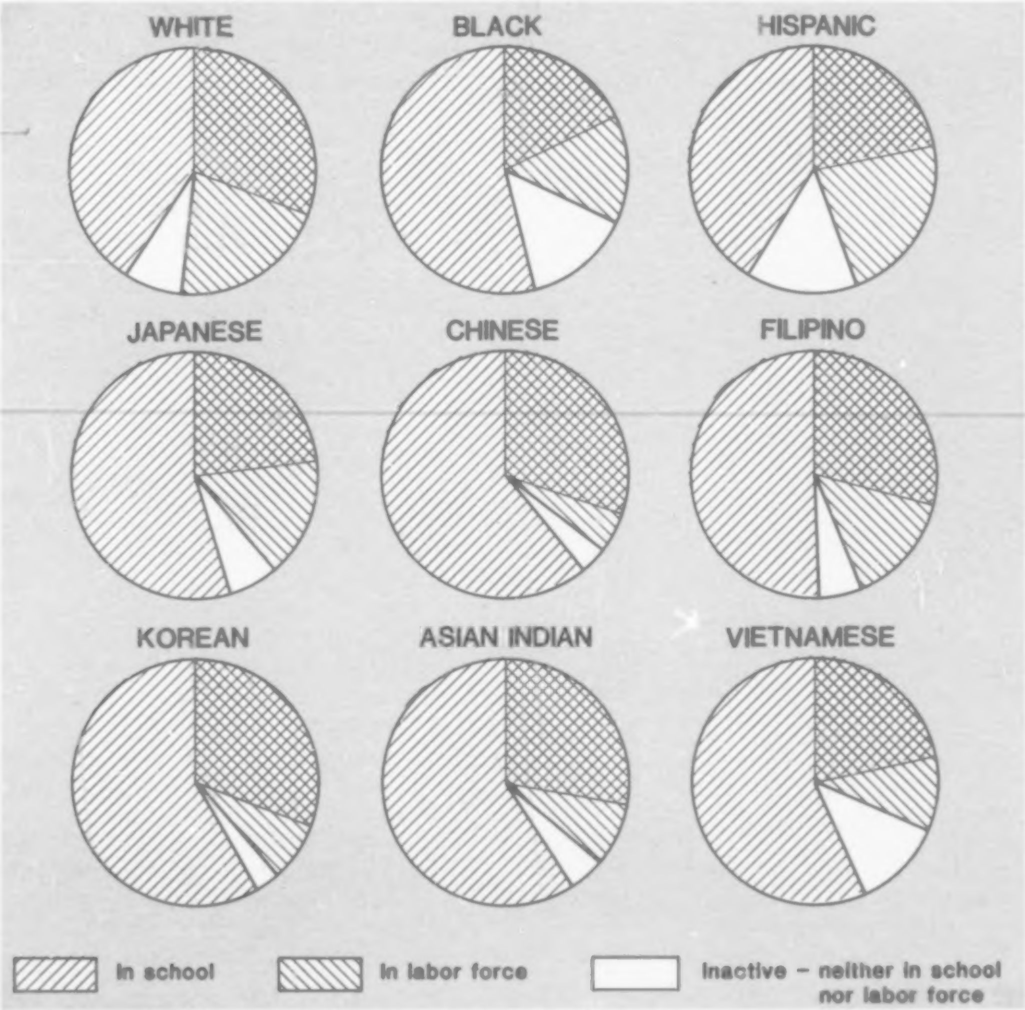
Asian Youth

Many media stories hailing the energy and drive of Asian American immigrants single out Asian American youth in particular. In contrast to white youth, Asian Americans are intent on achieving at school or getting ahead in the labor force, the articles say. The popular impression is that idleness is relatively rare among Asian American youth because of their strong family ties and parental authority. These are also cited as the major reasons for Asians' low rates of juvenile delinquency.

Statistics from the 1980 census support these views (Figure 7). Asian American youth born abroad are indeed less likely to be inactive—neither in school nor in the work force—than other American youth, particularly blacks and Hispanics. Because young Asian immigrants have such high rates of school enrollment, however, their labor force participation rates are somewhat lower than the rate for white youth, but still at least as high as the rate for blacks.

In 1980, 72 percent of white boys and girls aged 16-19 were in school and 52 percent were in the labor force; 31 percent were in both categories. Some 8 percent were neither in school nor in the labor force. Youth of the same ages born in Korea had a much higher share attending school, 89 percent, while only 38 percent were working or looking for work. Just 3 percent were inactive. The pattern was similar for other foreign-born Asian youth. Only Vietnamese-born youth had a higher rate of inactivity than whites, 12 percent, probably because so many of them were recent arrivals who had yet to

Figure 7. Activity Status of White, Black,, Hispanic, and Asian American Foreign-Born Youth Aged 16-19: 1980



Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 123 and 133, and unpublished tabulations of the foreign-born by country of birth.

take advantage of educational opportunities or find jobs. Even so, 78 percent of these Vietnamese youth were attending school, and their inactivity rate—like those of all other Asian groups—was below the inactivity rates for black youth, 14 percent, and Hispanics, 15 percent.

These findings support the notion that Asian American families believe in education for their children and are willing to support them while they add as much as possible to their educational credentials. This and Asian young people's apparent industriousness should stand them in good stead as they compete for jobs in America.

Income and Poverty

As widely reported in the press, the 1980 census revealed that median family income in 1979 for Asian Americans—$23,600 for the six groups making up 95 percent of Asian Americans—exceeded

Table 14. White, Black, Hispanic, and Asian American Worker Incomes and Family Poverty Levels in 1979

Population	Median income of a full-time worker	Percent of families below poverty level
White	$15,572	7.0
Black	11,327	26.5
Hispanic	11,650	21.3
Asian Americans by ethnic group		
Japanese	16,829	4.2
Chinese	15,753	10.5
Filipino	13,690	6.2
Korean	14,224	13.1
Asian Indian	18,707	7.4
Vietnamese	11,641	35.1
Foreign-born Asian Americans by country of birth		
Japan, total	9,937	5.6
Immigrated 1975-80	9,444	10.1
Immigrated 1970-74	9,946	6.2
Immigrated before 1970	9,986	4.3
Taiwan or Hong Kong, total	11,818	11.8
Immigrated 1975-80	9,676	22.8
Immigrated 1970-74	12,392	6.1
Immigrated before 1970	13,692	2.8
Philippines, total	12,715	5.3
Immigrated 1975-80	10,069	8.8
Immigrated 1970-74	13,110	3.8
Immigrated before 1970	14,037	4.6
Korea, total	9,589	7.9
Immigrated 1975-80	8,250	11.1
Immigrated 1970-74	9,814	6.6
Immigrated before 1970	11,698	4.0
India, total	13,138	5.0
Immigrated 1975-80	10,968	10.7
Immigrated 1970-74	14,140	3.2
Immigrated before 1970	15,015	2.2
Vietnam, total	9,256	30.3
Immigrated 1975-80	9,179	35.7
Immigrated 1970-74	8,866	8.7
Immigrated before 1970	12,120	6.8

Sources: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 148, 149, 158, 159, 164, and 165, and unpublished tabulations of the foreign-born by place of birth.

that not only of American families in general ($19,900), but also the level reported by white families ($20,800). The white median was topped by the Japanese ($27,350), Asian Indians ($24,990), Filipinos ($23,690), and Chinese ($22,560), and barely trailed by Koreans ($20,460). Among the six major Asian groups, only the Vietnamese ($12,840) fell below the white and national medians.[33]

These family statistics are misleading, however. The Asian American edge has much to do with the way Asian American immigrants have mobilized living arrangements and higher labor force participation to produce more workers per household. In 1980, 63 percent of family households headed by an Asian American contained two workers or more, and 17 percent had at least three. For whites, the comparable shares were 55 percent and 12 percent.[34] The census statistics on incomes *per worker* show that not all Asian American groups enjoy relatively high incomes. Moreover, within each of the Asian American groups, the foreign-born and particularly the latest immigrants have relatively low incomes.

The 1979 median annual incomes of full-time Asian American workers ranged from as high as $18,707 for Asian Indians to lows of $13,690 for Filipinos and $11,641 for Vietnamese (Table 14, data by ethnic group). Only Japanese, Chinese, and Asian Indian workers had median incomes above that of white full-time workers, $15,572. Filipinos, Koreans, and Vietnamese were below the white median. The incomes of foreign-born Asian American workers as a whole were below the general medians for full-time workers in all the ethnic groups, and the medians for the most recent immigrants, arriving in 1975-80, were lower than those of immigrants who arrived earlier (Table 14, data for foreign-born Asian Americans).

The importance of family and household living arrangements for the economic adjustment of Asian American immigrants is clear when we consider the percentages of families with incomes below the poverty level in 1979. Here the foreign-born do well relative to the groups as a whole. The percentages of families with foreign-born householders that were classified as poor in 1979 were lower than the overall percentages for the ethnic groups for all but those with a householder born in Japan, Taiwan, or Hong Kong. However, poverty was relatively high for the most recently arrived immigrant families, reflecting the problems some Asian immigrants have in finding work when they first arrive. For families headed by immigrants arriving 1975-80 who were born in Taiwan or Hong Kong, the proportion below the poverty level was 23 percent—more than triple the white figure of 7 percent, though still below the black figure of 27 percent. For the latest arrived Vietnamese families, the figure was 36 percent.

Even this 36 percent poverty figure of 1979 for Vietnamese families who arrived after 1975 considerably understates the economic and social problems that recent Indochinese refugees face. Over 400,000 Indochinese have arrived since the April 1, 1980, census enumeration and in comparison with the earliest group of refugees, these "second-wave" arrivals—many of them "boat people"—are less proficient in English, less educated, less experienced at holding jobs in urban occupations, and generally less familiar with Western culture. A survey in five areas across the country of 1,384 Indochinese households who had arrived in the four years 1978 through 1981 found that on arrival, nearly two-thirds of the adults could speak no English, 20 percent knew "hardly" any English, and only 17 percent had "some proficiency" in English.[35] By the time of the survey in 1982, however, 40 percent of adults were attending classes in English as a second language, and more than two-thirds of adults had had such instruction. Two-thirds of the households were below the poverty level after one year in the U.S., a figure that was still 30 percent after almost four years.

Table 15. White, Black, Hispanic, and Asian American Reliance on Public Assistance and Social Security in 1979

Population	Percent of households with no income from own earnings[a]	Percent of households with any income from Public Assistance[b]	Percent of households with any income from Social Security[c]
White	18.4	5.9	26.8
Black	23.4	22.3	23.1
Hispanic	15.7	15.9	14.6
Japanese	9.5	4.2	18.5
Chinese	10.2	6.6	13.9
Filipino	7.0	10.0	16.1
Korean	8.1	6.2	5.7
Asian Indian	16.3	4.5	16.9
Vietnamese	20.1	28.1	5.2

Source: Bureau of the Census, *1980 Census of Population*, PC80-1-C1, *General Social and Economic Characteristics*, Tables 128, 138, and 164.

[a] Wages, salaries, and self-employment income.
[b] Aid to Families with Dependent Children, General Assistance, and Supplementary Security Income for low-income elderly, blind, or disabled persons.
[c] Social Security for retired workers and their survivors, permanent disability insurance, and railroad retirement payments.

Are Asian Americans a Burden?

Data from the 1980 census indicate that Asian Americans are very little burden on state and federal public assistance resources—a concern often voiced about immigrants from any source. The census asked questions about sources of income in 1979, distinguishing household income from earnings and investments and income from government "transfers." Table 15 shows findings on households with no income from earnings (wages, salaries, or self-employment income) and households receiving two kinds of transfer payments from the government—income from public assistance (welfare) programs for the poor and Social Security for the retired elderly who have worked in the U.S. and paid Social Security during their working years. Although these data do not allow us to look separately at recent immigrants, they do provide an interesting comparison among Asian Americans and with white, black, and Hispanic households.

Keeping in mind that the patterns shown in Table 15 combine the effects of age composition of household members, economic need, and willingness to apply for public assistance, one cannot help but be struck by the low proportions of

Asian American households that have no income from earnings and the low proportions with any income from public assistance. Asian American households operate in the main on a pay-as-you-go basis. The contrast with black and Hispanic households is marked. (One reason for the low public assistance figures for Asian American households may be reluctance to admit to dependence on welfare. A recent survey of elderly Koreans in New York City reported this as one of the many problems in trying to obtain data on this group.[36])

Japanese, Filipino, and Asian Indian households were more likely than other Asian American households to report some Social Security income for 1979. These households probably included more elderly survivors of immigration earlier in the century. This Asian American demand on government transfer payments will increase as more Asian American workers reach retirement age.

As might be expected, Vietnamese reliance on public assistance exceeded even that of blacks in 1979; 28 percent of Vietnamese households received public assistance, compared to 22 percent of black households and 16 percent of Hispanic households.

As with poverty figures, the 1980 census findings on public assistance understate the plight of the most recently arrived Indochinese refugees. The 1982 survey of refugee families who had arrived from 1978 through 1981 reported: "Virtually all Southeast Asian refugees begin their American lives on welfare."[37] At the time of the survey, 65 percent of the households were receiving some public assistance and the figure was still at 50 percent for those in the U.S. for 40 months or more. Unemployment was 86 percent among adults in these households soon after arrival and still 30 percent after nearly four years in the U.S. Although this latter figure is high, the shift toward employment and away from public assistance shows that Indochinese refugees are prepared to do whatever is required to achieve self-sufficiency.

The central role of the household is evident. The survey found that the key point at which these households became self-sufficient was when a second family member found a job. The percentages of households with two or more workers increased as time went on and among these households, only 7 percent were below the poverty level. As with other Asian American groups, it is households functioning as income-generating units that permit even the most disadvantaged immigrants to begin the climb up the American ladder.

Future Prospects and Issues

Numbers in 2000

For the immediate future, immigration will continue to be the most important influence on the size and characteristics of America's Asian population. If present immigration trends continue, Asian Americans will expand their share of the total U.S. population.

Among the Asians, the Japanese are likely to become a decreasing proportion, because Japan is now sending relatively few immigrants—an average of just 4,000 a year since 1980[38]—and because Japanese American fertility is low. The share of Filipinos and Koreans should increase, because their immigration levels are now high—over 43,000 a year since 1980 from the Philippines and over 32,000 a year from Korea.

Most likely to increase is the share of Vietnamese, because of both relatively high fertility and immigration. Although refugees from Southeast Asia, particularly Vietnam, have been a dominant source of recent Asian immigration to the U.S., the flow of refugees will surely diminish over time. However, a steady stream of immigrants from Southeast Asia and especially Vietnam is likely to continue as refugees already in the U.S. acquire permanent resident (immigrant) status and are able to bring in family

Table 16. Asian American Population: 1980 and Projected for 1990 and 2000

	1980			1990			2000		
Rank	Ethnic group	Number	Percent	Ethnic group	Number	Percent	Ethnic group	Number	Percent
	Total	3,466,421	100.0	Total	6,533,608	100.0	Total	9,850,364	100.0
1	Chinese	812,178	23.4	Filipino	1,405,146	21.5	Filipino	2,070,571	21.0
2	Filipino	781,894	22.6	Chinese	1,259,038	19.3	Chinese	1,683,537	17.1
3	Japanese	716,331	20.7	Vietnamese	859,638	13.2	Vietnamese	1,574,385	16.0
4	Asian Indian	387,223	11.2	Korean	814,495	12.5	Korean	1,320,759	13.4
5	Korean	357,393	10.3	Japanese	804,535	12.3	Asian Indian	1,006,305	10.2
6	Vietnamese	245,025	7.1	Asian Indian	684,339	10.5	Japanese	856,619	8.7
	Other Asian	166,377	4.8	Other Asian	706,417	10.8	Other Asian	1,338,188	13.6

Source: Leon F. Bouvier and Anthony Agresta, "Projections of the Asian American Population, 1980-2030," in James T. Fawcett and Benjamin Cariño (eds.), *Asian and Pacific Immigration to the United States*, forthcoming.

members high on the preference list for 20,000-per-country annual quotas and then later, as U.S. citizens, can bring in immediate family members under the numerically unlimited category. For Vietnam, these numbers could be high if relations with Vietnam are regularized and the Orderly Departure Program, which has been permitting several thousand immigrants from Vietnam to enter the U.S. each year, is replaced with regular immigration coming under current U.S. law.[39] Immigration from Kampuchea could also be high if diplomatic relations are resumed with Kampuchea and the current difficulties in immigration from that country are removed.

Projections of the future size of the Asian American population are particularly risky because U.S. immigration policy is so important in determining that size and this policy may well change. The continuing efforts to change existing immigration law, while not prompted by the recent high level of Asian immigration, could, if successful, have a marked effect on that flow. For example, the flow would decrease if the system of preferences and emphasis on family reunification were changed and a cap put on the now unlimited category of immediate family members of U.S. citizens. On the other hand, some national flows might be increased by law changes. In 1981, for example, the annual 20,000-per-country quota for immigrants from "China" was changed to apply separately for the People's Republic of China and Taiwan, resulting in an increase in immigrants from the two countries from 25,800 in fiscal year 1981 to 35,800 in fiscal year 1984.[40]

In addition, the ebb and flow of Asian immigrants are intimately tied to political and economic trends in the countries of origin. Here the uncertainties abound: the effect of Hong Kong's reversion to Mainland Chinese authority in 1997, the political fates of Taiwan and the Philippines, the future attitude of the People's Republic of China concerning emigration from that vast pool, as well as what happens in Vietnam and Kampuchea.

For all these reasons, projections based simply on the assumption that today's flows will continue unchanged are likely to be inaccurate, just as projections of the Asian American population made 20 years ago would have been wrong because few people would have predicted the impact of the 1965 immigration law changes and the outcome of the Vietnam War. Nevertheless, with due caveats, Table 16 presents projections of the Asian American population, at least to the year 2000, prepared by Population Reference Bureau demographers Leon Bouvier and Anthony Agresta.

The assumptions of these projections—part of a longer-term set of projections—are: Life expectancy at birth in all groups rises from 69 for males and 76 for females in 1980 to 76 for males and 82 for females in 2010; fertility starts in 1980 at 3.0 births per woman for Vietnamese in the U.S. in 1980, 1.6 for Japanese, 1.8 for the other four main ethnic groups, and is slightly higher for post-1980 immigrants in all six groups, and all fertility rates converge at 1.8 births per woman in 2010; and immigration is 240,000 annually—about the actual annual average for Asians in 1980-84—divided between the different groups about as immigrants were in 1980-84.

The projections show a near-tripling in the Asian American population in the 20 years from 1980 to 2000, from just under 3.5 million to almost 10 million. In 2000, according to these projections, Asian Americans will comprise almost 4 percent of the U.S. population (projected to be about 268 million in 2000), up from 1.5 percent in 1980. By 1990 Filipinos will long have surpassed Chinese as the largest Asian American group, and Koreans, and especially Vietnamese, will have caught up to the Japanese, who as recently as 1970 were the largest Asian group in the U.S. In 2000 the Japanese are projected to be the smallest of the six major Asian American ethnic groups and the Vietnamese are projected to be in third place, up from sixth place in 1980.

Geographic dispersal

While Asian Americans today are heavily concentrated in a few states, geographic dispersal has been under way for some time and we can expect this trend to continue. Unlike the U.S. population as a whole, the proportion of Asian Americans in the West is falling and rising in the other three regions. Like other Americans, however, Asian Americans are moving toward the largest urban centers. Already there are dynamic Asian American communities in virtually all U.S. cities, and these communities are sure to grow and become increasingly visible in the years to come.

The geographic spread of Asians throughout America is likely both to diminish the cultural difference between Asian Americans and other Americans and to make Asian cultures more familiar to Americans. This country absorbs the cultures of its new residents, and they in turn contribute to the prevailing scene. These processes are already under way in many Pacific and Atlantic coastal cities and over time are likely to be found in cities and towns throughout the country.

Minority group or assimilation?

Although the fertility and mortality patterns of all but the latest arrived of Asian Americans already resemble those of white Americans, the age and sex characteristics of Asian Americans as a whole are unlikely to resemble those of the total population for years to come because of the continuing influence of immigration. Because immigrants are usually young adults in their family-formation years, Asian American households on average will continue to have proportionately more children than white households. However, one might predict that as immigrants become a smaller share of the total Asian American population, average household size will decline; households will contain fewer children and fewer relatives beyond the immediate family should be needed to make ends meet.

Asians' commitment to education should continue to boost their job status and income levels. Rising educational levels in the general population are associated with rising incomes and higher job status. And as the children of today's Asian American immigrants move through the educational system, the assimilation process should work to impart those values and views that are distinctly American. Thus, their children in turn will be less Asian than American.

This is a process that has occurred again and again through almost two centuries of heavy immigration into this country. But Asian American immigration introduces some novel elements. Foremost is the fact that Asians are not white. This nation has never, until perhaps now, admitted a nonwhite race to full parity with the white majority. The long-established Chinese and Japanese Americans seem already to have succeeded in breaking this barrier. Whether recently arrived Korean, Filipino, Asian Indian, and Indochinese immigrants have the same success remains to be seen.

In the past, Americanization has involved the absorption of values relating to schooling and work which encourage both individual success and national productivity. But the Americanization of Asian immigrants may have the opposite effect—reducing their exceptionally high level of dedication to learning and work.

For all the talk of a "model minority" and the pictures drawn in the press of a single monolithic Asian American minority group, we have found that Asian Americans are not homogeneous. Their demographic characteristics differ markedly: They have different age, fertility, and mortality patterns. Their family structures, employment patterns, occupations, incomes, and poverty levels are different. This is true among the different Asian American groups and within them as well. There are rich and poor Chinese, rich and poor Filipinos, rich and poor immigrants.

Especially important to note in this regard is the case of the Vietnamese and of Indochinese more generally. These most recent Asians to arrive in America have come for different reasons and from different circumstances than any other of the Asian immigrants and they will continue to exhibit singular characteristics for a long time to come. Even within the Indochinese groups there are marked differences in educational and occupational background between the first and second waves of refugees.

Third-generation Asian Americans

A major emphasis of this *Bulletin* has been on immigrants. This is inevitable, given the fact that such a large proportion of the current Asian American population is foreign-born. However, whether immigration continues at recent levels or not, it is certain that as the years pass more of the growing Asian American population of the U.S. will be native-born. Just as is true for Japanese today, the majority of all groups will eventually be natives of this country—second- , third- , or higher-generation Americans.

A second-generation Korean American joins the baseball team.

What does this mean for the future? It is not easy to say, but we know from the experience of the earlier European immigrants that separate groups lose their unique characteristics as the generations pass. People may know their ancestry, but they also consider themselves "American." The country still has ethnic European areas with distinctive shops, dress, and even language, but these tend to lose their enclave character as time passes. The United States has never been a "melting pot" where all people, regardless of ancestry, become exactly alike, but it *has* tended to become a "stew," where there are some differences but more often similarities of values and behavior.

Very often this comes about through intermarriage. Marriage out of a particular ethnic group guarantees that it will lose some of its insularity, and outmarriage is a time-honored tradition in the U.S. This is true—and will be true—of

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A Chinese American father and son in San Francisco.

Americans with Asian roots. Hawaii may serve as a model of the future. There, intermarriage among the various Asian, Pacific Island, and white groups has been occurring for generations. The result is a population with a significant share of people not "purely" of any one ethnic or racial group and analysts are hard put to describe the state's ethnic composition.

Television and language

Another important factor in the U.S. today is the growing commonality of forces which homogenize the culture of the nation. The pervading influence of television is perhaps the prime example. It is hard for a group to maintain a unique set of values and behavior when the children are exposed to the common culture that television portrays.

Some groups, such as the Mennonites, go to great lengths to maintain their own cultures and to insulate themselves from broader forces, but they are exceptions. Among Asian Americans, no group seems to have made a conscious effort to retain its ancestral identity, with perhaps the partial exception of one of the newest groups, the Hmongs—a tribe from the northern hills of Laos. Rather, we see the retention of certain cultural traits, foods, and traditions, but also the absorption of many "American" behaviors and beliefs.

Language is another issue. There are strong sentiments today about whether the U.S. should be a monolingual or multilingual nation. It is not the speakers of Asian languages which have precipitated this controversy, however, but primarily the large numbers of Spanish-speaking Hispanics. Proponents of "English as the language of the United States" argue that there can be no true national unit without a common language. The image of a nation split linguistically like Canada is a constant specter.

It seems unlikely that a persistent non-English-speaking Asian community will form in the U.S. If past experience is a guide, the Asian American belief in education and drive for achievement will result in a determined effort to learn English, the language needed for success in this country. It is true that there are urban pockets where one or another Asian language is spoken almost exclusively: Chinatowns in New York and San Francisco, for example, and the growing Korean community in Los Angeles. But these areas are composed mainly of recent immigrants; it is unlikely that their descendants will be anything but fluent in English.

Whether assimilation is "good" or "bad"—and how much is good or bad—is not the issue here. The United States has from its beginnings absorbed immense numbers of natives from many lands, and whether or not they have all "assimilated," the country and its citizens have flourished. Asian Americans are but the latest in a long line of immigrants, and their contributions and achievements will be added to those of their predecessors.☐

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Demographics and Housing in America

By George Sternlieb and
James W. Hughes

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Abstract—Family-building needs of the "nesting" generation and its offspring, the baby boomers born 1947-1964, dominated post-World War II housing demand and production to 1970. Centered on tract-house suburbia, annual housing starts averaged 1.5 million a year in the 1950s and 1960s. With growing real median family incomes, the average size of new dwellings increased and 63 percent of households owned their homes by 1970, compared to 44 percent in 1940. The baby boomers' arrival at the ages of household formation sparked the "Golden Housing Age" of the 1970s. Net household increase averaged a record 1.7 million a year and 19 million year-round dwellings were added to the national inventory, compared to 11 million in the 1950s and 1960s, despite a plunge in housing starts during the 1974-75 recession. Real median family income declined after 1973 and inflation escalated housing costs but at the same time fueled demand for housing as an investment hedge against inflation. The singles and "mingles" life styles of youthful baby boomers boosted rental housing, condominiums, and compact townhouses. Married-couple households dropped from 74 percent of the total in 1960 to 58 percent in 1985. Household formation and housing starts dropped drastically with the 1980-82 recession but bounced back as the economy recovered in 1983-85 and restrained inflation braked housing cost rises. Projections show overall household increases reduced to barely a million a year in 1990-95, with renter household gains at just 175,000, compared to half a million a year in the 1970s, as the household-formation ages of 18-34 are taken over by the baby bust generation. But this will be offset by the baby boomers' maturing into middle age. By 1995 most of this giant generation will be in the peak-earning, high-homeownership ages of 35-54. Married-couple households in this age bracket will account for 56 percent of the household gain from 1983 to 1995, boosting national affluence and the demand for upscale housing, likely to be located in suburbs. Low-income housing needs will be mitigated by slower increases in female-headed households and can be met in part by more rehabilitation and subdivision of existing housing.

Editor: Jean van der Tak Graphics: George Hager

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Demographics and Housing in America

By George Sternlieb and James W. Hughes

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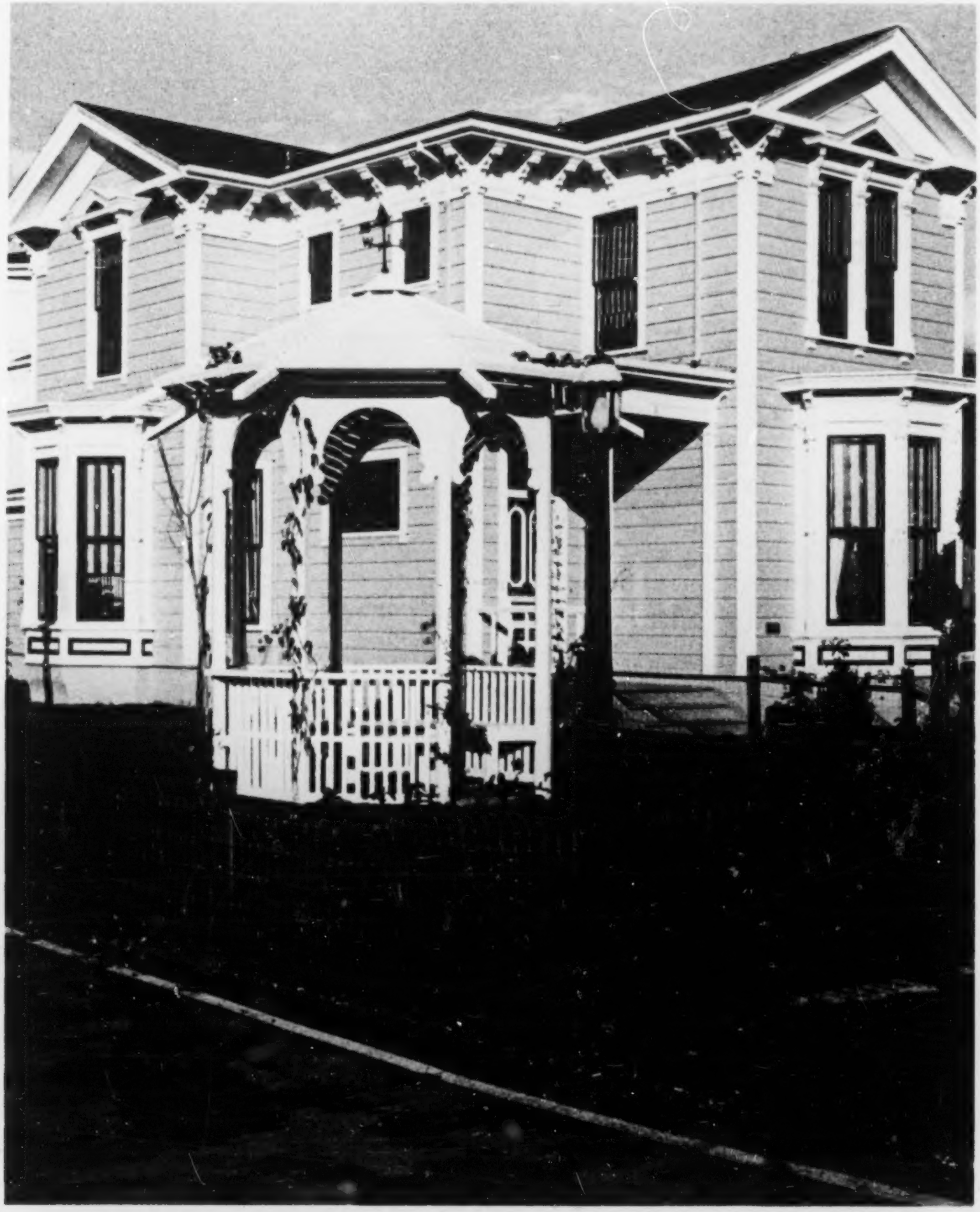

"America's home of choice is the detached, single-family house" (page 29). Over the next decade, the maturing of the giant baby boom generation into the peak-earning, high-homeownership, and highly marital and familial ages of 35-54 promises a flourishing demand for upscale housing. This will bolster a housing industry that faces an inevitable falloff in the total demand for housing as the ages of first household formation, 18-34, are taken over by the much smaller baby bust generation.

Demographics and Housing in America

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It may seem "obvious" to everyone that demographics determine housing; given enough people likely soon to be setting up housekeeping or "trading up" to larger homes, builders will build. But just how and when this happens has seldom been formally analyzed. Typically, the housing industry itself is most concerned about short-term trends, documented in monthly housing starts, for example, and government agencies are most interested in this year's housing activity compared to last year's. But housing America suitably requires a longer view. Sweeping demographic shifts have had much to do with the shape of housing in America in the past four decades and the changes now taking place could again dramatically alter the housing landscape.

Following World War II, the "nesting" generation and its offspring—the baby boom generation, born from 1947 to 1964—transformed not only types of housing but also housing geography. Tract-house suburbia, geared to family-raising, dominated the postwar housing scene until 1970. Subsequently, as the baby boom generation came of age it touched off a household revolution which redefined the housing market. Among the alternative housing types that emerged were units suitable for singles and "mingles" (unrelated adults sharing living accommodations). These included renovated lofts, older homes converted into several apartments, and condominiums.

For the remainder of this century, housing demand will reflect the maturing of the baby boom generation. In the early 1980s, "yuppies" (young urban professionals) and "puppies" (pregnant urban professionals) were important parts of the housing market. Now the market must change to meet the needs of the baby boomers as they age into their thirties and forties. Most will be married and have children to raise, and many will be well-off, dual-career couples.

Despite the "certainty" that demographic trends and shifts in life style create demand for housing, which in turn drives housing production, an important point should not be overlooked. The availability of housing not only reflects trends in household formation, but also helps shape those trends. The explosion of new households formed during the 1970s could not have taken place without the abundant quantity of new units added to the nation's housing inventory during that decade.

People need jobs and incomes before they can consider forming their own households. And before households are formed, affordable housing units must be available. America's demographics and housing markets are shaped by these simple but often neglected realities.

The association between demographics and housing is more readily apparent than the precise linkages. For example, did the sharp rise in housing costs during the 1970s, which required two incomes to ensure good housing, contribute to the dramatic increase in working wives and, in turn, to lower fertility? Did the sag in divorce rates in the early 1980s reflect the reduced affordability of independent housing that came with the recession of that period? Does the increased cost of housing and the large share of income it now takes explain why more and more young college graduates are returning to their parental homes rather than forming their own households? Certainly, economics must be added to the picture as the element that makes possible both household formation and housing production. Thus, the three variables are interwoven in this *Bulletin*.

The *Bulletin* describes current and past patterns of housing supply and production in the United States and the demographic trends, particularly household formation, that shape housing demand. The year 1983 is viewed as a transition point. In the 13 years before that, the baby boom generation passed through their peak years of independent household formation and first-time homeownership which are particularly important in influencing housing. This was also a turbulent economic era as the American economy had to absorb an incredible number of newcomers to the labor force while at the same time weathering the recessions and inflation that followed the sharp oil price increases of 1973 and 1979.

The years 1983 through 1985 were prosperous for most American households and certainly for the housing industry. Does this herald a new era of sustained homebuying, even without the incentive of high inflation which in the 1970s made housing important as a form of investment or forced savings? Or is it a pause before a much-altered housing environment?

We project housing demand in the decade to 1995, applying 1983 age-specific household patterns and ownership and renter rates to the Census Bureau's population projections by age for 1990 and 1995, and then sketch potential changes in the housing picture. The conclusion shows a shrinking in overall demand for housing along with a demand that is dramatically different from that of the 1970s, dominated by the maturing baby boom generation. The housing supply system will be forced to reinvent the American dream house.

Housing Supply

Housing America is one of the nation's premier businesses. As of 1985, there were over 90 million dwelling units in the country, with a market value in excess of $3 trillion. Each year, on average, the total stock is reduced by a number twice as large as the current housing inventory of Cleveland, while the value of annual additions, at prices of the mid-1980s, is close to $150 billion. The quality and quantity of housing reflect the wealth of America. And housing also serves as a vital economic stimulus; private residential investment alone presently accounts for 3.5 percent of the nation's gross national product, the country's output of goods and services.

Even these figures fail to reveal the full significance of housing in American society. Typically, most Americans rate housing as the single most important input to their life style; homeownership is a top priority among our aspirations. And the housing delivery system has not only accommodated most of the dramatic demographic and life style swings of post-World War II America but shaped them as well.

The standing inventory

As the 1980s began, America's housing inventory had risen to new heights in quantity and quality. Fully 86.7 million year-round housing units were tallied in the 1980 census. Of the 80 million occupied year-round units, nearly 52 million, or two-thirds, were occupied by owners; fewer than 29 million were occupied by renters (Figure 1). A nation of renters only 40 years earlier had been transformed into a nation of owners.

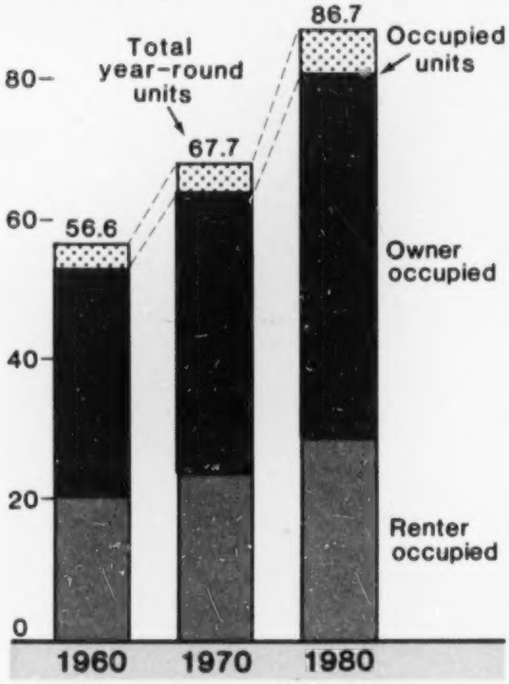
From 1970 to 1980, the increase of 19 million in year-round housing units came close to the 23 million increase in the nation's population. Over 55 million bedrooms were added to the inventory, bringing the total bedroom count to over 225 million in 1980. Numbers of persons per housing unit reached an all-time low. Owner-occupied units had a median household size of just 2.6 persons per unit; renter-occupied units a median of only 2.0 persons.

By nearly all physical criteria, there had been a steady reduction in deficient housing since World War II. Slums had not disappeared, but the housing of middle America had been revolutionized. Only 25.8 percent of the dwellings of 1980 had been built prior to 1940. Indeed, nearly one-quarter had been built since 1970. The proportion of units lacking some or all plumbing facilities had gone from 13.2 percent in 1960 to only 2.7 percent in 1980. More than half the inventory had either room air conditioners or central air conditioning. The country's shelter had been dramatically upgraded in the four decades since President Franklin D. Roosevelt had declared in his second inaugural address of 1937 that "one-third of the nation is ill-housed."

According to the 1980 census, approximately two-thirds of all housing units were separate single-family units of conventional construction. Some 11 percent were in buildings with two to four units and 17 percent were in structures of five or more units. Mobile homes had increased rapidly in the preceding two decades, but in 1980 they made up only 5 percent (4.4 million units) of the nation's housing supply.

Figure 1. The Housing Inventory: 1960, 1970, 1980

Housing units (in millions)



Sources: Bureau of the Census, *Census of Population and Housing, 1960, 1970, and 1980.*

From 1960 to 1970, the nation's year-round housing inventory had gone from 56.6 million to 67.7 million, for a gain of 11.1 million (Figure 1). This was about the same as the increase of the 1950s. In the 1970s, the response to market and demographic pressures was a net gain of nearly 19 million year-round housing units, close to double the increase of any previous intercensal decade in U.S. history. This decade, the "Golden Housing Age," remains the benchmark for viewing the 1980s and beyond. The 1950s and 1960s had seen the housing shortages of the Depression and World War II largely liquidated. The 1970s were a triumph for

Table 1. Housing Starts, Public and Private: 1890-1984

Period	Annual average housing starts
1890-99	294,000
1900-09	361,000
1910-19	359,000
1920-29	703,000
1930-39	273,000
1940-49	744,000
1950-59	1,507,000
1960-69	1,442,000
1970-79	1,548,000
1980-84	1,390,000

Sources: Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition,* Part I (Washington, D.C.: Government Printing Office, 1975), and "Housing Starts," *Construction Reports,* Series C-20, monthly.

Note: Excludes farm housing prior to 1960.

the housing industry in meeting the demographic challenge posed by the baby boom generation's arrival at the ages of household formation.

But even as the decade came to a close, there was a question of whether America could continue to expect abundant new supplies of housing at relatively inexpensive carrying costs. Despite its overall success, housing production during the 1970s had been marked by boom-and-bust cycles and it appeared that this pattern might continue. The 1980s began with the worst year-to-year downturn in housing production since World War II, followed by the mini-boom of 1983-85, and then the uncertainties of mid-decade.

Housing production cycles

Because of extreme variations in housing production tied to business cycles, the housing industry involves more risk and uncertainty than almost any other American enterpise. This erratic pattern of housing production and, thus, the availability and costs of housing is in turn a powerful influence on demographics, particularly household formation.

Table 1 shows the long-term pattern of average annual housing starts—the key monitor of residential production—in the decades from 1890 to 1980 and the equivalent for 1980-84. (The Census Bureau defines a housing start as taking place when excavation begins for the footings or foundation of a building intended primarily as a housekeeping residential structure for nontransient occupancy.) In the first three decades, from 1890 to 1919, housing starts averaged around 300,000 per year. The average soared to 700,000 per year in the post-World War I decade of the 1920s, propelled by the massive migration from rural to urban areas and accompanying decline in household size. A then-record annual high, 938,000 starts, was achieved in 1925.

This was followed by a drop of 60 percent in the decade annual average to 273,000 in the 1930s as the Great Depression took its toll. In the worst of those years, 1933, housing starts fell to 93,000 units, less than 10 percent of the 1925 high. The 1940s saw a recovery, beginning with worker housing needed during World War II, but only to an average of 744,000 a year, about the level of the 1920s.

The waning of wartime shortages ushered in the era of tract development. Stimulated by easy mortgages available to returning veterans through the GI bill and the Veterans Administration, housing production became a driving force in the American economy. Dominating the housing market was the "nesting" generation, about to spawn the baby boom. Average annual starts in the 1950s, more than 1.5 million, came close to the combined averages of the three preceding decades. And this was about the level for the 1960s and 1970s. (Gains in housing units are the net result of new construction—housing starts plus placements of mobile homes—demolitions, and conversions, such as transforming attics into separate dwelling units or converting older homes into several apartments. The much greater gain in housing units during the 1970s compared to earlier decades was due to more mobile

Table 2. Private Housing Starts and Gross National Product: 1964-1984

(Years when GNP dropped in bold type)

Year	Total private housing starts		Starts in structures with						Gross National Product (Constant 1972 dollars, in billions)
			1 unit		2 to 4 units		5 units or more		
	Number (in 1,000s)	Percent	Number (in 1,000s)	Percent	Number (in 1,000s)	Percent	Number (in 1,000s)	Percent	
1964	1,529	100.0	971	63.5	108	7.1	450	29.4	$ 876
1965	1,473	100.0	964	65.4	87	5.9	422	28.6	929
1966	1,165	100.0	779	66.9	61	5.2	325	27.9	985
1967	1,292	100.0	884	65.3	72	5.6	376	29.1	1,011
1968	1,508	100.0	899	59.6	82	5.4	527	34.9	1,058
1969	1,467	100.0	811	55.3	85	5.8	571	38.9	1,088
1970	1,434	100.0	813	56.7	85	5.9	536	37.4	1,086
1971	2,052	100.0	1,151	56.1	120	5.8	781	38.1	1,122
1972	2,356	100.0	1,309	55.6	141	6.0	906	38.5	1,186
1973	2,045	100.0	1,132	55.4	118	5.8	795	38.9	1,255
1974	1,338	100.0	888	66.4	68	5.1	382	28.6	1,248
1975	1,160	100.0	892	76.9	64	5.5	204	17.6	1,234
1976	1,538	100.0	1,162	75.5	87	5.7	289	18.8	1,300
1977	1,987	100.0	1,451	73.0	122	6.1	414	20.8	1,370
1978	2,020	100.0	1,433	70.9	125	6.2	462	22.9	1,439
1979	1,745	100.0	1,194	68.4	122	7.0	429	24.6	1,479
1980	1,292	100.0	852	65.9	109	8.4	331	25.6	1,475
1981	1,084	100.0	705	65.0	91	8.4	288	26.6	1,514
1982	1,062	100.0	663	62.4	80	7.5	320	30.1	1,485
1983	1,703	100.0	1,068	62.7	114	6.7	522	30.7	1,535
1984	1,750	100.0	1,084	61.9	121	6.9	544	31.1	1,639

Sources: Bureau of the Census, "Housing Starts," *Construction Reports*, Series C-20, monthly; and Bureau of Economic Analysis, *Survey of Current Business*, monthly.

home placements and conversions, while actual new housing starts were about the same as in the 1950s and 1960s.)

Average annual housing starts slipped below 1.4 million in the early 1980s. Growth was stronger by the mid-1980s, but the outlook for the long term is for slower growth as an aging population dampens the potential for new houshold formation.

Recent boom-and-bust cycles

The data in Table 2 on annual starts of private housing from 1964 to 1984 reveal the turbulence in the housing industry which is masked in the data on decade-long average annual housing starts. The period from 1964 to 1969 overlapped the expansion of the business cycle which lasted for a record 105 months from 1961 to December 1969. Yet even during this period, annual housing starts fluctuated by more than 20 percent between high- and low-start years.

After this period of relative economic stability, the vagaries of the business cycle reappeared and with them, reaffirmation of the fact that housing production bears the brunt of the national economic cycle. Housing starts began the 1970s at 1.4 million, in 1970. During the next three years, 1971 through 1973, they averaged fully 50 percent more—over 2 million units—only to turn down with equal precipitousness in 1974 and 1975 during the recession that began in November 1973 and reached its lowest point in March 1975. Housing starts in 1975, 1.16 million, were less than half the 2.36 million of 1972. By 1977 and 1978, starts were back up to the 2 million level, only to plunge again by nearly half to barely a million in 1981 and 1982. The 70 percent resurgence to 1.7 million in 1983 was equally sudden and was not foreseen by economic forecasters. While housing starts have continued upward in 1984 and 1985, the outlook has rarely been so uncertain.

Changes in the number of units involved in housing starts have been even more confusing than the abrupt changes in total housing starts. Housing starts of single-unit dwellings accounted for more than 75 percent of the total in 1975 and 1976, but only 55 percent in 1973, as shown in Table 2. (Single-unit dwellings include both detached single-family dwellings and attached units, such as townhouses, that are separated from adjoining units by a ground-to-roof wall and do not share attics, basements, or utilities with any other units.) Units in buildings with two to four units remained relatively constant as a proportion of total housing starts from 1964 to 1984.

The turbulent housing market is most evident in shifts in the starts involving units in buildings with five or more units. Some 325,000 of housing units started in 1966 were in structures with five or more units; in 1972, that number was nearly three times higher, 906,000. The early 1970s saw the wave of federal support for low-income multifamily housing launched under President Lyndon Johnson's Great Society; the housing act of 1968 proposed a ten-year goal of 6 million new subsidized housing units for low-income families. At the same time, condominiums were becoming popular for the first time, prompted by changing life styles and new markets among single persons and the elderly and new mechanisms for financing housing.

The multiunit housing balloon burst after 1972. Because of several scandals, President Richard Nixon ordered a moratorium on subsidized housing programs in 1973 and the condominium boom of the early 1970s was dampened by the recession of 1974 and 1975. Only 204,000 housing starts in structures with five or more units were registered in 1975, barely one-fifth of the 1972 peak.

TICKET
CENTRAL

Apartment buildings in New York City. The housing industry's boom-and-bust cycles are most evident in shifts in housing starts in structures with five or more units.

By 1983 the number had climbed back up to well over half a million, aided by the general resurgence in the housing market and the realization that condominiums answer the needs of young couples, as well as singles, who prefer to buy rather than rent but cannot yet afford a single-family home in the suburbs. Even at more than half a million, however, housing starts in apartment buildings of five or more units accounted for only 31 percent of the total in 1983, compared to nearly 40 percent at the beginning of the 1970s.

Business cycles and housing activity

Both total housing starts and their configuration are highly dependent on business cycles and in turn affect those cycles. Housing historically has been viewed as a powerful countercyclical tool, either as a stimulus leading the way out of recession and pulling the rest of the American economy with it or as a damper on an overheated economy. A variation of 400,000 housing starts is directly equivalent to a 1 percent change in the gross national product. And this is only part of the impact; furniture purchases and a host of expenditures related to people's acquisition of new housing show the same boom-and-bust patterns as housing construction.

Table 2 also lists the 1964-84 trend in the nation's gross national product (GNP) in constant 1972 dollars. GNP levels rose with business cycle peaks in 1973, 1978, and 1979, and with the economic recovery of 1983-84, and dipped when oil price increases led to the recessions of 1974-75 and 1980-82 (shown in boldface in the table). The correspondence between GNP and housing starts is very clear, as every housing builder will testify.

However, boom-and-bust economic cycles are accentuated in housing start patterns. For example, between 1973 and 1975, the GNP declined by only 1.6 percent, from $1.25 trillion to $1.23 trillion (in constant 1972 dollars), but total private housing starts plunged by 43 percent, from 2.05 million units in 1973 to 1.16 million in 1975. Conversely, housing starts climb much more than the GNP as business cycles mount, as in 1972, 1978, and 1983.

Thus, housing production is shaped not only by demographic trends but also by broad economic cycles. Housing demand and supply are also affected by housing costs.

Housing costs

The "Golden Housing Age" of the 1970s was fueled initially by the last phase of the then-unquestioned post-World War II prosperity. As inflation gained momentum, housing costs escalated to new levels. Desperate to acquire housing, prospective buyers and renters helped to bid up prices and sustained the housing surge. The legacy for the 1980s are housing costs that have soared to unprecedented levels.

In 1970 the median monthly gross rent in the U.S. was $108. By 1985 it had more than tripled to over $350. The median sales price of new single-family homes in 1970 was only $23,000; by the end of 1985 it was over $80,000, accompanied by steep increases in mortgage interest rates. The homebuying and homerenting power of Americans has eroded. This adds to the uncertainty of the housing outlook, even though housing starts have rebounded since the early 1980s. The aim is still to upgrade housing for all Americans, especially to eradicate central city slums and pockets of inadequate rural housing. But cost dominates the housing picture in the 1980s.

Increasingly it takes two incomes for a household to lead the "good housing life." It is not clear how housing costs, and the cost of the expensive household goods that couples now want, have affected trends in women's labor force participation and, in turn, fertility levels. But even with the prevalence of dual-earner couple households, shelter costs as a proportion of total household income have risen substantially over the last 15 years. At the same time, women's participation in the labor force has shifted from interludes before and after childrearing to the expectation that this is to be continuous throughout the working ages and fertility sank to the record low of 1.7 births per woman in 1976 and has fluctuated only slighly since then. Important reasons for these trends may well be the high costs of shelter and also increasing cost of private transportation as more and more of the nation's housing is located far from places of work in central cities and suburbs.

Will the constraints of housing economics be overcome by the demographics of the 1990s when most of the baby boom generation will be in their high-earning thirties and forties and most are likely to be in two-income families? To answer this question we take a look back at the demographics of the postwar era.

Demographics and Housing Demand

Three demographic trends have been of most importance in shaping housing demand since 1970. The first is the slower pace of total population growth and the second, countervailing, trend is the rising rate of household formation, that is, more households generated from a given number of people of specific ages. Cutting across this is the rapid change in the configuration of American households; once "atypical" life styles have become much more important and have influenced shelter choices. The near monolithic middle class housing market that dominated for a generation following World War II had been fragmented by the early 1980s into many different segments, representing a wide array of life styles, consumption patterns, and shelter preferences.

Population growth and change

During the 1950s, as the baby boom rose to its peak in 1957, the U.S. population grew by 18.6 percent. The increase was down to 13.5 percent in the 1960s and dropped further in the 1970s to only 11.0 percent, less than two-thirds the growth rate of the 1950s. The sheer numbers added to the population remain impressive, however. Because the base population has grown so large—up to almost 240 million in 1985, compared to 152 million in 1950—even small percentage increases represent massive numbers of people. Annual numbers added are currently about 2 million (the sum of natural increase, births minus deaths, and net legal immigration), and this number has remained about the same in the past two decades, despite declining growth *rates*.

For housing, the evolving age structure of the population is even more important than its total growth. A population age structure dominated by preschool and school-age children, as was true of the U.S. in the 1950s and 1960s, requires housing types different from those required when young and maturing adults predominate, as in the 1970s and early 1980s.

Housing demand as shaped by population trends can be divided into two broad eras since World War II. The first was defined by the "nesting" generation—eager buyers of the house that Levitt made famous shortly after the war and which was duplicated all over America. This generation's aspirations and family-raising requirements dominated housing markets from 1945 to 1970. The second era, from 1970 to 1983, was defined by their offspring, the baby boom generation, as they reached the ages of household formation and entered the housing market. The year 1983 is chosen as the end-point of this second era because it signaled a recovery from the devastating recession of 1980-82 that was quite different from the housing demand pattern of the 1970s. The break between the two eras is not distinct. Overlapping both was the housing impact of the often-forgotten "war baby" or "goodbye baby" generation, born during World War II.

Another era lies ahead in the late 1980s and 1990s as the baby boom generation matures, with an effect on the nation's housing market likely to be quite different from the effects of their childhood and young adult years.

The nesting generation: 1945-70

By the end of World War II, it had been 15 years since the last sustained output of new housing in America. This compounded the enormous demand for housing generated by rapid postwar household formation, sharply rising fertility, and an expanding economy.

Recovering from the Depression was a long and painful process. In 1940, 45 percent of dwelling units lacked some or all plumbing facilities. Even a decade later, nearly half the nation's occupied units were heated by coal or wood. But America emerged from the trauma of

World War II with a remarkably homogeneous set of values about desirable housing. In a perhaps somewhat romantic retrospective, William Manchester described the yearning:

> "The dreams of different soldiers were remarkably alike . . . for a home that was not in the army . . . Betty Friedan, then fresh from Smith, later recalled that 'women as well as men sought the comforting reality of home and children.' . . . Possibly because there was so much correspondence between the front and home, the girls and the men in the ETO [European Theater of Operations] and the Pacific not only longed for the same future, they often agreed about its most minute details. The house would have a white picket fence. It would be within walking distance of a school. The girl would have a chest of silverware, the ex-GI a den. They would garden together. He would probably commute to work, because they lived in a quiet suburb."[1]

The dreams of homeownership, long frustrated by the economic constraints of the 1930s and wartime separations and shortages, set the stage for the housing eruption that followed.

Housing was shaped by the requirements of childrearing. Between 1940 and 1960, the number of children under age five nearly doubled, from 10.5 million to 20.3 million, and the number aged 5 to 14 increased by more than half, from 22.4 million to 35.5 million. The addition of nearly 23 million children under age 15 drove the housing industry. Tract-house suburbia was born along with the baby boom.

But the era of the American dream house was not only the product of demography but also shaped that demography. Without the ready availability of "nests," the baby boom probably would have been a much more modest phenomenon.

Expanding and maturing families, aided by the postwar prosperity that lasted to the 1970s, further changed the housing market. The middle class began the era in a Levitt-type house that was, by present standards, an 800-square-foot tribute to modesty, typically with one-and-a-half baths and an unfinished second floor. This was the tract shelter depicted in the classic *New Yorker* cartoon of a harried commuter, arriving back in his suburban development a little under the weather and not being able to remember which of the many identical houses was his. However, when he found it, he loved it.

Tract-house suburbia was born along with the baby boom.

But standards moved upward with maturing demographics and increased buying power. Real median family income increased by 37 percent between 1950 and 1960 and by another 34 percent between 1960 and 1970. The median size of newly built single-family dwellings was up to 1,100 square feet by the mid-1950s and more than 1,500 square feet by the late 1960s. The nesting generation moved from a "stripped-down" house to one that was richly appointed for modern living. It was also one they were likely to own; by 1970, 62.9 percent of households owned the dwellings they occupied, compared to 43.6 percent in 1940.

With the scaling upward of housing expectations and realization, the modest housing that characterized the beginning

Table 3. U.S. Population, by Age: 1970, 1980, 1983

(Numbers in thousands)

Age	1970	1980	Change 1970-80		1983	Change 1980-83	
			Number	Percent		Number	Percent
Total	205,052	227,704	22,652	11.0	234,496	6,792	3.0
Under 5	17,166	16,457	-709	-4.1	17,826	1,369	8.3
5-13	36,672	31,080	-5,592	-15.2	30,116	-964	3.1
14-17	15,924	16,139	215	1.4	14,633	-1,506	-9.3
18-24	24,711	30,347	5,636	22.8	30,148	-199	-0.7
25-34	25,324	37,593	12,269	48.4	40,334	2,741	7.3
35-44	23,150	25,882	2,732	11.8	29,492	3,610	13.9
45-54	23,316	22,737	-579	-2.5	22,342	-395	-1.7
55-64	18,682	21,756	3,074	16.5	22,219	463	2.1
65 and over	20,107	25,714	5,607	27.9	27,384	1,670	6.5

Sources: Bureau of the Census, *Statistical Abstract of the United States: 1984*, 104th edition (Washington, DC: 1983), and "Estimates of the Population of the United States, by Age, Sex, and Race: 1980 to 1983," *Current Population Reports*, Series P-25, No. 949, 1984.

of this era was often forgotten. The frame of reference for baby boomers seeking housing in the 1980s is not their parents' first house but the more expansive dwelling that was achieved in later years.

Baby boomers enter the housing market: 1970-83

The baby boom generation entered the housing market in full force during the 1970s. Between 1970 and 1980, the number of people aged 25-34, ages of household formation and first-time homebuying that are crucial to the housing industry, grew by 48.4 percent—more than four times the 11 percent increase in the total population (Table 3). At the same time, persons aged 18-24 increased 22.8 percent. Nearly 18 million people out of a total population gain of 22.7 million were in the 18-34 age bracket. This put tremendous pressure on the capacity of the labor force to absorb new entrants, but it also provided an enormous base for the housing market.

The impact of the baby boom generation was very different from that of their parents. Their values and life styles in the 1970s produced an eclectic mix of household types and this in turn revised the types of housing that were offered.

The other major increase of the 1970s occurred among the elderly, aged 65 and over, whose numbers went up 27.9 percent. This was another impetus for more segmentation of the housing market; retirement communities boomed.

At the beginning of the 1980s, from 1980 to 1983, the growth "bulge" moved into the 25-34 and 35-44 age brackets. The 35-44-year-old age group accounted for more than half of the total population increase (3.6 million of 6.8 million) in these three years. This age group is particularly important in the demand for single-family homes; often they are second-time-or-more homebuyers "trading up" to larger dwellings. The "middle-aging" of American that has now begun will strongly influence the housing market in the decades to come.

The early 1980s also witnessed the beginning of the shrinkage in housing demand to be expected with the maturing of the baby bust generation, born in the late 1960s and 1970s. The reduction in this age group between 1980 and 1983 was centered on the population of high school age, 14-17, but numbers had also begun to decline among those aged 18-24, and it is among the later years at this stage in the life cycle that young people typically form their first independent households.

Table 4. U.S. Population, by Age: 1983 and Projected for 1990 and 1995

(Numbers in thousands)

Age	1983	1990	Change 1983-90		1995	Change 1990-95	
			Number	Percent		Number	Percent
Total	234,496	249,731	15,235	6.5	259,631	9,900	4.0
Under 5	17,726	19,200	1,374	7.7	18,616	−584	3.0
5-13	30,116	32,183	2,067	6.9	34,443	2,260	7.0
14-17	14,633	12,940	−1,693	−11.6	14,071	1,131	8.7
18-24	30,148	25,777	−4,371	−14.5	23,684	−2,093	−12.0
25-34	40,334	43,506	3,172	7.9	40,489	−3,017	−6.9
35-44	29,492	37,845	8,353	28.3	41,994	4,149	11.0
45-54	22,342	25,391	3,049	13.6	31,378	5,987	23.6
55-64	22,219	21,090	−1,129	−5.1	20,951	−139	−0.7
65 and over	27,384	31,799	4,415	16.1	34,006	2,207	6.9

Sources: 1983: See Table 3; 1990 and 1995: Bureau of the Census, "Projections of the Population of the United States: 1982 to 2050 (Advance Report)," *Current Population Reports*, Series P-25, No. 922, October 1982, middle series.

Note: The figures in this table from the advance report of these Census Bureau projections, middle series, are slightly higher than the figures from the same series in the final report of the projections, published by the Census Bureau in, "Projections of the Population of the United States, by Age, Sex, and Race: 1983 to 2080," *Current Population Reports*, Series P-25, No. 952, May 1984.

Middle-aging America: 1983-95

Barring sudden unknowable shifts in immigration, national population projections for the next decade can be viewed with reasonable confidence, particularly for the adult and near-adult population. Table 4 shows the latest "middle series" projections of the U.S. Census Bureau, by age, for 1990 and 1995. (This series assumes a fertility rate of about 1.8 to 1.9 births per woman and net immigration of 450,000 a year.) The three most striking trends from 1983 to 1990 illustrate the inexorable effects of population history: the "middle-aging" of the baby boom generation; shrinkage in the first-household-formation ages caused by the baby bust generation; and a substantial increase in the elderly population, aged 65 and over, born during the relatively high-fertility years before 1925.

By 1990 the baby boom generation will have reached the middle years of adulthood. Of the total population increase of 15.2 million between 1983 and 1990, more than half, 8.4 million, comes in the 35-44 age bracket. The leading edge of this enormous cohort increases the 45-54-year-old age group by 3 million and another 3 million increase falls in the trailing edge of the baby boom generation, persons aged 25-34 in 1990. Thus, virtually all of the nation's population increase in these seven years comes in the stage of the life cycle when the demand for single-family homes is at a peak. This is reinforced by the baby boom "echo," the children of this generation; the number of children under age 14 will increase by 3.4 million.

Chastening for builders of rental housing, however, is the projected shrinkage in the group aged 18-24, the prime ages for new household formation and prime market for modestly priced rental housing. This age group, part of the baby bust generation born as fertility declined from the early 1960s to the mid-1970s, will be reduced by 4.4 million between 1983 and 1990. At the same time, however, 4.4 million will be added to the ranks of the elderly, aged 65 and over.

Thus, the remainder of the 1980s will see a general aging of housing consumers and, with it, shifts in the types of housing demand.

These trends will continue in the first

half of the 1990s. By 1995 the oldest baby boomers will be in their late forties and the oldest baby busters will be entering their thirties. The largest market target, 42 million persons, will be in the 35-44-year-old age group. This was the youth generation of the 1960s and 1970s, who followed a clear, if difficult, path from first-time household formation to first-time homeownership. Their maturing housing demands will present a more complex prospect for the housing industry.

The fastest growth between 1990 and 1995 comes in the 45-54 age group, which increases by almost 6 million persons. Except for the elderly, with a 2.2 million increase, all other groups in the ages of housing consumption will be shrinking. The 18-34-year-old group will decline by more than 5 million, thus reducing the relative size of the pool of consumers of entry-level housing to its lowest point since the early 1970s. But this shrinkage in potential housing demand could be offset by patterns of household formation and re-formation.

The Household Revolution

Basic to housing demand is the household, defined as an individual or group of individuals occupying or sharing a dwelling unit. The manner in which individuals group and regroup into household arrangements is crucial to the actual demand for housing, magnifying or dampening the effects of population shifts. Household living arrangements have been revolutionized in the past decade and a half.

Shrinking household size

Household size has the most direct effect on housing demand. Shifts in household size can affect the housing market far more than changes in population as a whole. For example, from 1970 to 1980 the population of New York City declined by 10 percent, but the number of households declined by just 2 percent. In the same ten years, New Jersey gained 330,000 households, although the state's population increased by only 194,000 persons; nearly two households were added for each additional person in the population. Indeed, at the national level, nearly half of the enormous increase in housing supply from 1970 to 1980 was prompted by the decline in household size and, thus, increase in the number of households rather than by population increase itself.

Table 5. Household Size: 1940-1985

Year	Average persons per household	Year	Average persons per household
1940	3.67	1975	2.94
1950	3.37	1976	2.89
1955	3.33	1977	2.86
1960	3.33	1978	2.81
1965	3.29	1979	2.78
		1980	2.76
1970	3.14	1981	2.73
1971	3.11	1982	2.72
1972	3.06	1983	2.73
1973	3.01	1984	2.71
1974	2.97	1985	2.69

Sources: Bureau of the Census, "Households, Families, Marital Status, and Living Arrangements: March 1985 (Advance Report)," *Current Population Reports*, Series P-20, No. 402, October 1985, Table 2.

In March 1985, the average number of persons per household was just 2.69, the lowest in the nation's history, but the decline in household size has not been steady throughout the 20th century. At the time of the Great Depression, household size had been shrinking for nearly 100 years, but the severity of the depression forced households to double up. Young couples returned to their parental homes and many separately housed elderly had to move in with their offspring. Fortunately, this experience could be forgotten during the years of almost continuous prosperity that followed World War II.

During the war, housing shortages also forced much doubling up at the same time that households were fragmented as some 10 million men and women were mobilized into the armed services and millions of workers moved to work in defense factories, often a long way from home.

Average household size at the time of the 1950 census was 3.37 persons, down from 3.67 in 1940 (Table 5). During the next 15 years, households "undoubled" and housing supply soared, but this was offset by the larger families of the baby boom era. Thus, by 1965 average household size had declined only to 3.29 persons.

The decline accelerated with the end of the baby boom and beginnings of the greatest spurt of housing production in the nation's history. Between 1970 and 1976, average household size declined 5 percent and continued to decline by about 1 percent a year through 1981. By that time, the average was down to 2.73 persons, about 20 percent below the level of 1950. Considering average household size alone, this means that if that average had remained constant from 1950 to 1981, the population of 1981 would have required 16 million fewer dwellings.

The seemingly inexorable decline was again interrupted in 1982 and 1983 as the worst recession since the Depression took its toll. As housing starts faltered, so did the confidence and economic means to form a new household. Average household size stabilized—at about 2.73 persons—for the first time since 1960. However, the average fell again in the next two years as the economy recovered and by March 1985 was down to the record low of 2.69 persons per household. It remains to be seen if the decline will continue or if household size has reached its lowest point. Much of the answer depends on patterns of marriage and divorce.

Marriage, divorce, and singles

Trends in marriage and divorce play a key role in the changing size and types of American households. In 1960 more than three-quarters, 76.4 percent, of all males aged 18 and over were married; by 1985 the proportion had dropped to two-thirds, 65.8 percent (Table 6). The decline was similar for women and for both whites and blacks. At the same time, the percentage of divorced Americans 18 and over has soared, tripling for both males (2.0 to 6.1 percent) and females (2.9 to 8.3 percent).

The household count is likely to be reduced by marriage or when an unmarried couple sets up housekeeping together, if both partners are moving from single-person households. Divorce, on the other hand, tends to produce two households from one. Marital breakups have become an increasingly important factor in the demand for rental housing, despite the high remarriage rate of both men and women who are divorced. Underpinning the scaled-down size of contemporary households are these trends of declining marriage and increased divorce, along with reduced fertility and larger numbers

Table 6. Married and Divorced Persons Among Population Aged 18 and Over: 1960-1984

(Numbers in percent)

Sex and race	1960	1970	1980	1984
		Married		
Males	76.4	75.3	68.4	65.8
White	77.3	76.1	70.0	67.7
Black	68.4[a]	66.9	54.6	50.6
Females	71.6	68.5	63.0	60.8
White	72.2	69.3	64.7	62.8
Black	66.3[a]	61.7	48.7	44.5
		Divorced		
Males	2.0	2.5	5.2	6.1
White	2.0	2.4	5.0	6.0
Black	2.2[a]	3.6	7.0	7.0
Females	2.9	3.9	7.1	8.3
White	2.7	3.8	6.8	8.0
Black	4.8[a]	5.0	9.5	11.0

Sources: Bureau of the Census, *Statistical Abstract of the United States: 1985*, 105th edition (Washington, D.C.: 1984) Tables 44 and 46, and "Marital Status and Living Arrangements: March 1984," *Current Population Reports*, Series P-20, No. 399, July 1985, Table 1.

[a] 1960 black data are for nonwhites.

Table 7. Single (Never-Married) Persons Among Population Aged 18 and Over, by Age: 1960-1985

(Numbers in percent)

Age	Males 1960	Males 1970	Males 1980	Males 1985	Females 1960	Females 1970	Females 1980	Females 1985
Total	17.3	18.9	23.8	25.2	11.9	13.7	17.1	18.2
18	94.6	95.1	97.4	98.5	75.6	82.0	88.0	90.7
19	87.1	89.9	90.9	95.8	59.7	68.8	77.6	82.7
20-24	53.1	54.7	68.8	75.6	28.4	35.8	50.2	58.5
25-29	20.8	19.1	33.1	38.7	10.5	10.5	20.9	26.4
30-34	11.9	9.4	15.9	20.8	6.9	6.2	9.5	13.5
35-39	8.8	7.2	7.8	10.1	6.1	5.4	6.2	8.1
40-44	7.3	6.3	7.1	8.6	6.1	4.9	4.8	5.3
45-54	7.4	7.5	6.1	6.3	7.0	4.9	4.7	4.6
55-64	8.0	7.8	5.3	6.1	8.0	6.8	4.5	3.7
65 and over	7.7	7.5	4.9	5.3	8.5	7.7	5.9	5.1

Sources: Bureau of the Census, *Statistical Abstract of the United States: 1984*, and "Households, Families, Marital Status, and Living Arrangements: March 1985," Tables 3 and 4.

of the elderly living alone.

Declining marriage is reflected in the increasing proportions of young people who are delaying marriage. In 1960, 10.5 percent of women aged 25-29 had never married; by 1985 the figure was up to 26.4 percent (Table 7). Similarly, 28.4 percent of women aged 20-24 were still single in 1960, but the proportion had doubled to 58.5 percent in 1985. This much longer period of remaining single could change the future of household relationships.

These patterns, launched and borne along by the baby boom cohort, have reshaped America's housing. Sales of single-person homes and upscale home furnishings are now flourishing as this maturing generation of often dependent-free individuals reaches its prime earning years. The world of affluent singles and near-singles ushered in by the baby boomers may well continue and characterize the post-boom generation as well.

Changing household patterns and market segmentation

The *distribution* of households by size gives a better idea than simple *average* size of the revolution in the American household that social forces have brought about. In just 14 years, from 1970 to 1984—only half the length of a typical home mortgage—the proportion of housing units occupied by a single person increased from 17.1 to 23.4 percent (Table 8). Well over half (54.9 percent) of the nation's households now consist of only one or two persons. Households with seven or more persons make up only 1.6 percent. A generation ago the popular view of the "under-

Table 8. Households, by Size: 1970 and 1984

(Numbers in thousands)

Size of household	1970 Number	1970 Percent	1984 Number	1984 Percent
Total	63,401	100.0	85,407	100.0
1 person	10,851	17.1	19,954	23.4
2 persons	18,333	28.9	26,890	31.5
3 persons	10,949	17.3	15,134	17.7
4 persons	9,991	15.8	13,593	15.9
5 persons	6,543	10.3	6,070	7.1
6 persons	3,534	5.6	2,372	2.8
7 or more	3,195	5.0	1,394	1.6

Source: Bureau of the Census, "Household and Family Characteristics: March 1984," *Current Population Reports*, Series P-20, No. 398, April 1985, Table G.

Table 9. Household Composition: 1960, 1980, 1985

(Numbers in thousands)

Type of household	1960		1980		1985		Percent change	
	Number	Percent	Number	Percent	Number	Percent	1960-1980	1980-1985
Total	52,799	100.0	80,776	100.0	86,789	100.0	53.0	7.4
Family households	44,905	85.0	59,550	73.7	62,706	72.3	32.6	5.3
Married-couple	39,254	74.3	49,112	60.8	50,350	58.0	25.1	2.5
Other family, male householder	1,228	2.3	1,733	2.1	2,228	2.6	41.1	28.6
Other family, female householder	4,422	8.4	8,705	10.8	10,129	11.7	96.9	16.4
Nonfamily households	7,895	15.0	21,226	26.3	24,082	27.7	168.9	13.5
Householder living alone	6,896	13.1	18,296	22.7	20,602	23.7	165.3	12.6
Households of two or more persons	999	1.9	2,930	3.6	3,480	4.0	193.3	18.8

Sources: Bureau of the Census, "Population Profile of the United States: 1982," *Current Population Reports*, Series P-23, No. 130, 1983, and "Households, Families, Marital Status, and Living Arrangements: March 1985," Tables 1 and 7.

housed" was of such large households in too little space; now the problem has been mitigated by demographic change. The classic image of the American family has been the typical household of the 1950s—mother and dad and two or three children. Now households of four or more persons take up barely a quarter of the country's dwellings.

Are these patterns here to stay? Much of the country's existing housing was built to suit the demographics of the past. Will these large homes now become obsolete? Is there a potential for subdividing them into smaller units? Or could the baby boom generation, though marrying late, still have the children to fill the three-, four-, and five-bedroom houses that were so prevalent—and in demand—during their childhood and which still predominate in the housing market?

Certainly with the trend in household composition over the past quarter century the changes seem unrelenting. Married-couple families accounted for 74.3 percent of the 52.8 million households of 1960; in 1985 their share was down to 58 percent of the total of 86.8 million (Table 9). "Atypical" families with female householders have taken up the slack among family households, most of them single mothers with their children. Between 1960 and 1985, family households headed by females increased from 4.4 million to over 10 million. In just the past five years, from 1980 to 1985, they increased six and a half times faster (16.4 percent versus 2.5 percent) than traditional married-couple families. Such growth has helped change the very concept of the American family.

Nonfamily households, consisting of householders living alone or unrelated groups of people, represented 27.7 percent of all households by 1985, up from 15 percent in 1960. The fastest growing of these are households of two or more persons, many of them "yuppies" grouped together in order to be able to afford the high rents of fashionable city quarters or close-in suburbs. By 1985 there were 3.5 million nonfamily households of two or more persons, up three and a half times from the 999,000 of 1960. Much of this represents a substitute for marriage, or delayed entry into that formal bond. Households containing two unrelated adults of the opposite sex nearly quadrupled in number between

By 1984, 55 percent of American households consisted of only one or two persons.

1970 and 1985, from 523,000 to 2 million.[2] In 1970 such living arrangements were likely to be initiated by older persons—a widow renting a room to a male college student, for example. Now some 60 percent of householders in these situations are aged 25-44.

In absolute numbers, householders living alone have increased most among all households. This does not all reflect the glamorous new single-person world of upwardly mobile young people. Nearly 40 percent of persons living alone in 1985 were aged 65 and over, mostly women. But the baby boomers have been at the forefront of the trend.

With a massive wave of household formation combined with new heights of homeownership, the 1970s were unparalleled in housing affluence. They also produced varieties of housing demand unimaginable a generation earlier. New types of shelter burst upon the market. The two-bedroom house, once virtually unmortgagible, quickly found a market in the West and began to move across the country. New high-rise apartment buildings in New York City offered living arrangements designed for luxurious sharing: two private master-bedroom suites, complete with bathrooms, adjoining a common living-room and kitchen area. And condominiums, offering minimal maintenance and a host of recreational facilities, captured an important share of the market, both in central cities and increasingly in suburbia.

Driving the restructuring of American housing were the baby boomers and the life styles of their youthful years. As they enter the middle years of their life cycle, however, history would suggest that family-oriented households will again predominate. Our projections also suggest that this will happen, although history could be changed by a continuation of the life styles introduced by the baby boom generation in the 1970s. A resurgence of family-oriented households will require a healthy economy, and this was not true of America in the early 1980s.

Household formation and recessions

Projecting housing starts to meet future demand involves estimates of new household formations (the net change in occupied housing units), along with allowances for vacancies (to permit mobility), conversions (that provide new dwelling units from existing buildings), and demolitions or abandonments (losses from the inventory that can be made up). Typically, forecasters of housing starts have taken the key variable of new household formation as a given—the inexorable result of demographics. Only recently has the lesson of the Depression been rediscovered: household formation is bound both by the availability of housing and the financial ability and conviction required to invest in it. When the economy, employment, and confidence in the future falter, there is a clear tendency to reduce household formation: to further delay marriage and to avoid divorce or going off on one's own. This and the murky economic outlook have now added much uncertainty to housing builders' expectations for the future.

The reasons for this uncertainty are clear from the data on the growth in total numbers of households from 1980 to 1985 (Table 10). Analysts expected the 1980s to add at least 1.7 million households a year, the annual average gains during the 1970s. The first year of the decade, from March 1980 to March 1981, added almost this number, 1.6 million. But expectations of unlimited housing demand were dashed by the impact of the severe recession that began in July 1981 and bottomed out in November 1982. Household growth dropped to less than 1.2 million in 1981-82 and to a 40-year low of under 400,000 for the year ending March 1983. The annual average for 1980-83 was just 1.1 million, no higher than in the 1960s. This plummet in household formation was paralleled by the plunge in housing starts to barely a million in 1981 to 1982 (Table 2, page 7). Along with the recession and growing unemployment, major factors underlying the sharp drops in household formation and housing starts in the early 1980s were the financial deregulation begun under the Carter administration and the 1979 decision by the Federal Reserve Board to follow a monetarist policy. The costs of borrowing, that is, interest rates on mortgages, rose to record levels, from an average of 8.7 percent in 1977, for example, to 16.3 percent in 1981. But the runaway inflation that had escalated housing prices in the late 1970s and early 1980s was finally dispatched.

With economic recovery in 1983, household growth bounced back up to 1.49 million for the year ending in March 1984. The slightly lower gain of 1.38 million in the next year brought the average for the two years, 1983 to 1985, to 1.45 million.

Does this signal a return to high levels of household formation and a healthy demand for new housing or will both turn down again with the next dip in the economy? Now that the nation is so generously housed, much of future housing demand could be met by more intensive use and reuse of existing housing—subdividing and rehabilitating older dwellings, for example. This would reduce the need for new construction. Housing seekers might not choose this, but it is a feasible alternative when a faltering economy and rising unemployment put the cost of newly constructed housing beyond the reach of many.

Optimists see the faltering of household formation and housing construction in the early 1980s as providing even greater opportunities in the second half of the decade; the unleashing of pent-up demand for a home of one's own could boost the demand beyond what might be expected from demograhic trends. Pessimists are concerned that the stagnant real incomes of American households and real increases in housing costs as a share of those incomes could drastically reduce the number of housing consumers in the future. For a perspective on these alternatives, we take a closer look at the economic forces that have influenced demographics and housing in the past decade and a half.

Table 10. Household Growth: 1980-1985, by Year, and 1960-1985, Annual Average

(Numbers in thousands)

Year or period	Total households	Annual change: Period	Annual change: Number
1980	80,776	—	—
1981	82,368	1980-81	1,592
1982	83,527	1981-82	1,159
1983	83,918	1982-83	391
1984	85,407	1983-84	1,489
1985	86,789	1984-85	1,382
		Average annual change	
1960-70		1.06 million	
1970-80		1.74 million	
1980-83		1.05 million	
1983-85		1.45 million	

Source: Bureau of the Census, "Households, Families, Marital Status, and Living Arrangements: March 1985," Table 7.

Note: Data as of March for the respective years.

Economic Shocks and Housing

After 25 years of postwar prosperity, the 1970s delivered a series of blows to the American economy. First came the 1971 termination of dollar-to-gold conversions, followed by the floating of the dollar on the international currency market in 1973. This ended the era of restrained inflation and dollar stability upon which fixed rates of exchange depended. Compounding the "aftershocks" of this event were OPEC's quadrupling of oil prices in late 1973 and another steep hike in 1979. The oil shocks and declining value of the dollar helped unleash surging rates of inflation. They also led directly to the recession of 1974-75, then the worst economic downturn since World War II, and the even more substantial rolling recession of 1980 through 1982.

The recessions sent housing starts plunging. But at the same time inflation pushed up the demand for new housing. Not since Civil War days had there been such a loss of confidence in cash. Deposits in banks and insurance holdings eroded in value and rates of return on industrial investment shrank in real terms. Housing became the preferred investment in the flight from the dollar, a "collectible" that for the American middle class was like the gold Napoleon coins that the French had historically hidden in mattresses as a hedge against inflation. Housing prices and mortgage interest rates soared. Nevertheless, consumers were willing to devote ever-increasing portions of their incomes to homeownership, and this in turn escalated housing costs further.

As a form of investment or forced savings, as well as tax savings, housing became much more important as a refuge from the chronic inflation of the 1970s than as a refuge from the elements. A prospective homebuyer's first question was not "Do I like it?", as it had been when housing was primarily a shelter. Rather it was, "If I buy it, will I be able to sell it? And if I can sell it, will I get enough to cover inflation? Because if I fall off the train and make the wrong housing buy—or buy on the wrong side of town—it may be a good shelter but I'll never be able to get out from under it."

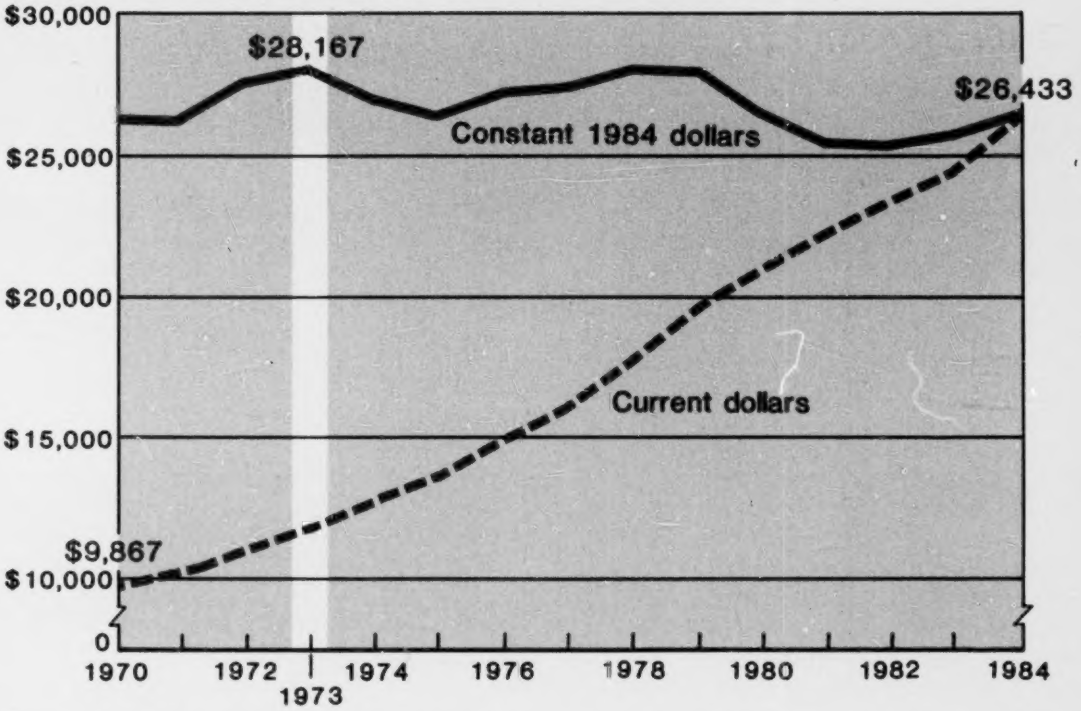
Eager to board the train, however, all who could afford to do so invested in housing, and also many who could not. For at the same time that inflation was sending housing prices soaring, it was also eroding gains in family income.

Declining real family income

For two and a half decades following World War II, Americans could glory in an ever-rising standard of living. Real median family income, measured in constant 1984 dollars, increased by more than $5,000 during the 1950s and over $6,000 in the 1960s. But the escalator faltered with the oil shocks of 1973 and 1979 and recessions and inflation that followed. In *current* dollars, median family income rose steadily from $9,867 in 1970 to $26,433 in 1984 (Figure 2). But in real dollars—making adjustments for inflation—median family income has stagnated since its peak in 1973, reducing the buying power of family incomes. The median family income of 1984, $26,433, was $1,734 less than the 1973 figure of $28,167, measured in constant 1984 dollars, although there had been fluctuations with the business cycle and a promisingly strong upturn with the latest economic recovery of 1983 and 1984 (Figure 2).

Shifts in family and household composition also affected the broad trend. Millions of wives have gone to work in the past decade and a half as it has become evident that the good life in America increasingly requires a household economic team of two workers. With their contribution, married-couple families with both spouses employed stood at the top of the income ladder in 1983, with a median income of $36,110 (Table 11). But the increase in nontraditional families, with much lower incomes, especially families maintained by single women,

Figure 2. Median Family Income: 1970-1984



Source: Bureau of the Census, "Money Income and Poverty Status of Families and Persons in the United States: 1984 (Advance Data from the March 1985 Current Population Survey)," *Current Population Reports*, Series P-60, No. 147, August 1985, Tables 2 and 3.

Table 11. Median Household Income, by Type of Household: 1983

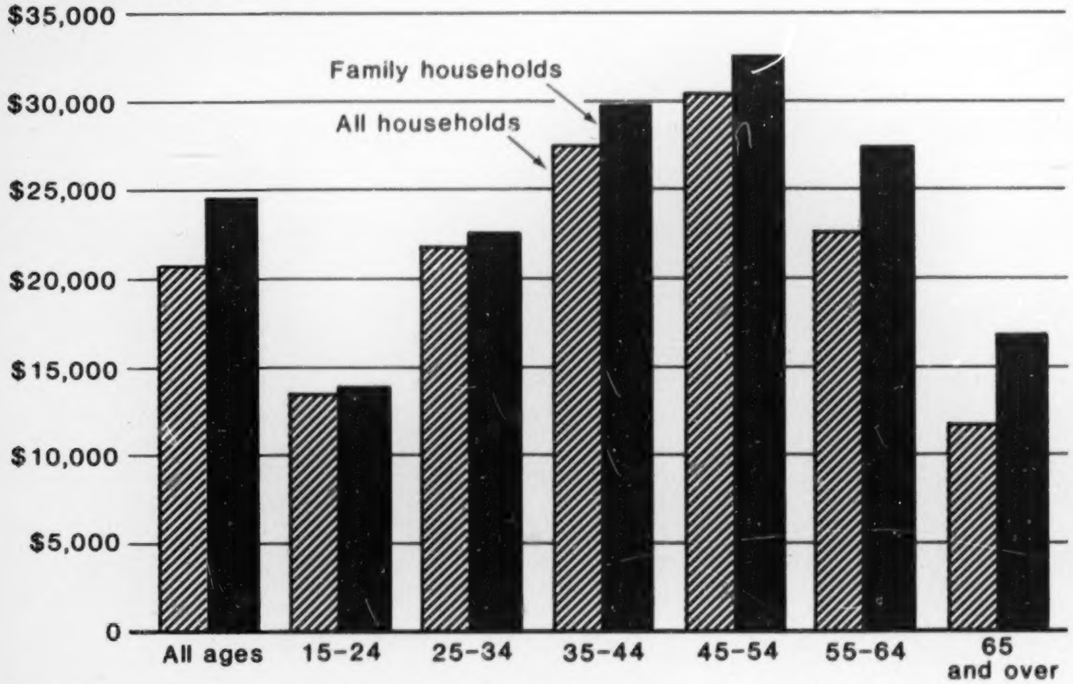
Type of household	Median income
Total households	$20,885
Family households	24,580
Married-couple families	27,286
Wife in paid labor force, householder year-round, full-time worker	36,110
Male householder, no wife present	21,845
Female householder, no husband present	11,789
Nonfamily households	12,010
Householder living alone	10,747

Source: Bureau of the Census, "Money Income and Poverty Status of Families and Persons in the United States: 1983 (Advance Data from the March 1984 Current Population Survey)," *Current Population Reports*, Series P-60, No. 145, August 1984, Tables 1 and 18.

dampened the impact of working wives' contribution to the aggregate income of American families. In 1983 the median income of family households with a female householder with no husband present was $11,789, less than half the median income of $24,580 for all family households. The increase in single-person households has also served to keep aggregate household income lower than it might have been. The median income of single-person households in 1983, $10,747, was lowest on the ladder.

Another dampener on aggregate household and family income growth in the 1970s and early 1980s was the surge in young households, whose incomes are much lower than those of more mature households. In 1983 the median income for all households with householders aged 15-24 was $13,402, less than half

Figure 3. Median Household and Family Incomes, by Age of Householder: 1983



Source: Bureau of the Census, "Money Income and Poverty Status of Families and Persons in the United States: 1983," Tables 6 and 13.

the peak of $30,352 for all households in the 45-54-year-old bracket, and the median for the youngest family households was $13,841, compared to the peak of $32,592 for families with householders aged 45-54 (Figure 3).

But the income lag did not forestall the rush to buy homes. The increase in numbers of homeowners far outpaced the increase in renters.

Owners versus renters

With the financial incentives for investing added to the baby boom generation's entry into the mainstream of housing consumption and Americans' aspirations for a home of their own, homeownership soared among all who could afford it during the 1970s and early 1980s. Rental dwellings were increasingly occupied by the poor, the young, and nontraditional households maintained by single men or women.

Between 1970 and 1983, the number of owner householders increased by 37 percent, compared to a 27 percent increase in renter households (Table 12). The shift from rental housing to homeownership was most striking among married couples: an increase of 27 percent in homeowners and a decline of 10 percent in renters. The most vigorous growth in renter households was among nontraditional households; those with male householders grew by 120 percent. Yet homeownership increased more rapidly than rentals (85 percent versus 59 percent) among single-person households, long thought to be outside the homebuying market.

Homeownership has increasingly become a privilege of the middle class. In 1973 the median income of renter households was 63 percent of the median of households that owned their homes. Just ten years later, in 1983, this

Table 12. Percent Change in Owner and Renter Households: 1970-1983

Type of household	Owner	Renter
Total households	37.2%	27.0%
2-or-more-person households	30.7	15.1
Married-couple families	26.8	−10.3
Other male householder	79.1	120.0
Other female householder	49.0	77.2
1 person households	85.4	59.0
Male householder	131.1	76.0
Female householder	67.7	47.2

Source: Bureau of the Census, "General Housing Characteristics for the United States and Regions: 1983, Annual Housing Survey: 1983, Part A," *Current Housing Reports*, Series H-150-83, 1984.

proportion had dropped to 51 percent—$12,000 versus $24,400. Rental housing had lost its more affluent occupants.

Shifts of the 1980s

Few forecasters of the 1970s foresaw the oil surplus of the first half of the 1980s and the enfeeblement of OPEC. The wild oscillations of the value of the dollar in international currency markets were also a sharp change from the 1970s. Together these developments have helped dampen inflation in the U.S.

It remains to be seen if the future economy is more like that of the 1960s than that of the 1970s. If the era of shocks has passed, the economics of housing should be favorable. Restrained inflation would help keep a lid on shelter costs, while continuation of the renewed income growth of 1983 and 1984 would bolster effective housing demand. The key shift appears to be demographic, the maturing of the baby boom generation into the ages at which family households and homeownership predominate by a wide margin.

Household and homeownership age patterns

Historical links between age and household and tenure patterns are most important in anticipating long-term future housing demand. Family households reach a peak among householders of middle age

Table 13. Households, by Type and Age of Householder: 1983

(Numbers in thousands)

Age of householder	Total households		Family households		Nonfamily households	
	Number	Percent	Number	Percent	Number	Percent
Total households	83,918	100.0	61,393	100.0	22,525	100.0
15-24	5,695	6.8	3,436	5.6	2,259	10.0
25-34	19,104	22.8	14,217	23.2	4,887	21.7
35-44	16,020	19.1	13,659	22.2	2,362	10.5
45-54	12,354	14.7	10,476	17.1	1,878	8.3
55-64	13,074	15.6	10,009	16.3	3,066	13.6
65 and over	17,670	21.1	9,597	15.6	8,074	35.8
	Percent distribution of household types, by age of householder					
Total households		100.0		73.2		26.8
15-24		100.0		60.3		39.7
25-34		100.0		74.4		25.6
35-44		100.0		85.3		14.7
45-54		100.0		84.8		15.2
55-64		100.0		76.5		23.4
65 and over		100.0		54.3		45.7

Source: Bureau of the Census, "Household and Family Characteristics: March 1983," *Current Population Reports*, Series P-20, No. 388, 1984.

Table 14. Homeownership, by Age of Householder: 1983

(Numbers in thousands)

Age of householder	Number of households	Percent owners
Total households	83,918	64.9
15-19	404	9.9
20-24	5,291	20.0
25-29	9,465	38.2
30-34	9,639	55.7
35-39	8,759	65.8
40-44	7,261	74.1
45-54	12,354	77.1
55-64	13,074	80.5
65-74	10,603	76.9
75 and over	7,067	71.6

Source: Bureau of the Census, "Household and Family Characteristics: March 1983."

or near-middle age, as illustrated by the patterns for 1983, shown in Table 13. Nonfamily households are most prominent among the youngest householders, under age 25, and the oldest, aged 65 and over. At these ages, family households made up 60 percent or fewer of total households in 1983 (bottom of Table 13). Among householders aged 35-54, however, family households accounted for fully 85 percent of the total. Indeed, householders in this age bracket accounted for fewer than 20 percent of all nonfamily households in 1983 (top of Table 13). The baby boom generation is inevitably approaching the stage in the life cycle at which family households predominate.

Homeownership also rises with householder's age. In 1983 just 20 percent of householders aged 20-24 owned their dwellings (Table 14). The proportion climbed to 56 percent among householders aged 30-34, reached a peak of 81 percent among householders aged 55-64, and was still more than 70 percent among the oldest householders, aged 75 and over. All other things being equal, therefore, an aging population should mean a continuing increase in homeownership and decline in the overall proportion of renters.

The types of dwelling units that people prefer tend to fall into a pattern according to stages in the life cycle of households. The typical progression of these household life cycle stages in American society today is shown at the top of Table 15. "First time" singles, setting up their first independent households, are likely to predominate in rental apartments, while "advancing singles," with higher incomes, gravitate toward modestly priced apartment condominiums. Young marrieds typically remain only briefly in rental apartments and then purchase starter homes, which today could be either condominiums or the new "compact" houses—townhouses, sometimes euphemistically called "villas" or "patio homes." Compact families (stage No. 4) also tend to be found in such starter homes, while "expanding families" are very likely to move to traditional detached single-family dwellings.

American homeowners are relatively mobile as they attain affluence, unlike their Western European peers. Often, established families who can afford it "trade up" again to prestige housing, sometimes just as the offspring are about to

Table 15. Household Life Cycle Stages

Typical contemporary progression

1. Single "first timers"
2. Advancing singles
3. Young marrieds
4. Compact family
5. Expanding family
6. Established family and pre-empty nesthood
7. Empty nesthood
8. Active retired and fully retired
9. Widows or widowers

Alternative household situations

Permanent singles and resingled
Mingles (unrelated adults sharing housing accommodations
Never-nesters
Single-parent families

leave home ("pre-empty nesthood"). With the nest emptied, maintenance-free condominiums become attractive to parents left behind. For the active retired and fully retired, there are adults-only condominiums and the rapidly increasing numbers of retirement communities. The final stages of life are reflected in the boom in nursing homes and growing interest in terminal-care facilities of all kinds.

In addition to these classic household life cycle stages, there are now alternative household situations characteristic of more and more people which are bound to have an effect on future housing markets (bottom of Table 15). These include the permanent singles and "resingled" (divorced or separated persons without children in the home); the "mingles" (unrelated adults, often of the opposite sex, sharing housing accommodations); never-nesters (married couples who choose to remain childless); and single-parent families.

The Future of Housing

In estimating future housing demand, there are two areas of relative certainty, at least till the end of the century. First are the numbers of adults in the different householder ages that shape housing consumption. Unlike children, whose numbers could fluctuate, these adults already exist, barring the addition of some immigrants. Second are the links between age and patterns of households and housing tenure, owning versus renting, which are so deeply entrenched that they can be expected to continue, in the near future at least.

In painting the most probable course of housing demand and resulting changes in the housing market in the years to 1995, we assume that age patterns of household types and housing tenure will remain as they were in 1983 and apply these to the U.S. Census Bureau's population projections by age for the period from 1983 to 1995. The scenario we describe could be altered by the economy and consumer tastes. Vagaries of the business cycle that inevitably produce fluctuations in household formation and housing demand are unpredictable and can lead to bankruptcies in the housing industry. Housing preferences are more predictable. Living styles may have changed, but consumer tastes in housing and homebuilders' response to that demand are more conservative than in the case of perhaps any other consumer good. Both tend to "do tomorrow what we did yesterday," whatever the fashions of the moment. In general, numbers of bedrooms in newly constructed housing have not been reduced and average floor space has continued to increase, despite predictions that the increasingly small size of households would mean shifts to more "rational" choices.

Baby boom generation leads the way

The future of housing demand will be shaped most by the future of the baby boom generation. Demographers conventionally define this generation as persons born from 1947 through 1964, which means that by 1995 it will be nearly half a century since its first members were born and more than 30 years since the advent of its last members. Virtually the entire generation will be in the traditionally peak-earning ages of 35 to 54. The majority will have "paired and nested" and many will be privileged "super couples" of two working professionals. The resources that the generation commands, relatively unencumbered by offspring, will be available for housing.

This giant generation has redefined consumer markets at each stage of its life cycle. First financed by parental pocketbooks, the spending spree began with diapers in the 1940s and 1950s, moved to soft drinks and records in the 1960s, and then designer jeans and stereos in the 1970s, when the generation's own spending took over. Gaining

Table 16. Households, by Type, Tenure, and Age of Householder: 1983 and Projected for 1990 and 1995

(Numbers in thousands)

1983

Age of householder	Total	Family households			Nonfamily households	
			Other family			
		Married couple	Male householder	Female householder	Male householder	Female householder
			Owner households			
All householders	54,494	38,853	1,195	4,427	3,513	6,507
Under 25	1,097	759	47	80	163	49
25-34	8,985	7,060	162	553	872	338
35-44	11,149	8,895	263	1,103	589	299
45-54	9,525	7,499	240	929	401	456
55-64	10,519	7,709	210	777	440	1,383
65 and over	13,219	6,929	273	986	1,048	3,982
			Renter households			
All householders	29,423	11,055	821	5,043	6,001	6,504
Under 25	4,597	1,670	152	727	1,071	977
25-34	10,119	4,377	254	1,812	2,175	1,501
35-44	4,871	1,997	178	1,222	970	504
45-54	2,829	1,109	111	588	553	468
55-64	2,555	893	74	346	562	680
65 and over	4,451	1,009	51	348	670	2,374

Sources: 1983: Bureau of the Census, "Household and Family Characteristics: March 1983." 1990 and 1995: Projections by the authors.

momentum during the 1980s, this spending will reach a peak in the 1990s and the peak of the baby boom generation's reshaping of the prime consumer market of housing.

The background to likely housing changes to 1995 is presented in Table 16, which shows numbers of owner and renter family and nonfamily households by householders' ages in 1983 and as projected for 1990 and 1995, and in Table 17 (page 28), which shows the gains or losses in these numbers from 1983 to 1995. The picture that emerges is of slower growth in numbers of households, but households will be more mature and more likely to contain married couples and own their homes.

As already noted, gains in numbers of households averaged 1.7 million a year between 1970 and 1980 but slipped to barely one million a year from 1980 to 1983 as recession put a damper on household formation. According to our projections, however, households should increase from 1983 to 1990 by 1.3 million a year, on average. This growth falls midway between the furious pace of the 1970s and the more modest growth of the 1960s and early 1980s.

From 1990 to 1995, household growth is projected to retreat to one million a year—the "disaster" level of the early 1980s. The nearly 100 million American households in 1995 will be dominated by the middle-aged.

These trends are paralleled by labor force projections of the Bureau of Labor Statistics. During the 1970s, as the baby boom generation reached working ages, numbers of people in the labor force increased by a record 2.4 million a year, on average. The outlook for the 1980s is an annual average gain of 1.8 million and for 1990 to 1995, a gain of only 1.2 million a year. This slippage largely reflects the

1990	Family households			Nonfamily households	
		Other family			
Total	Married couple	Male householder	Female householder	Male householder	Female householder
		Owner households			
61,124	43,641	1,335	5,025	3,937	7,187
951	670	35	71	141	35
9,705	7,625	173	607	953	347
14,319	11,447	340	1,398	756	378
10,814	8,504	279	1,066	457	508
9,976	7,318	190	738	422	1,308
15,359	8,077	318	1,145	1,208	4,611
		Renter households			
31,969	12,035	882	5,582	6,428	7,045
3,948	1,410	141	635	917	846
10,918	4,766	260	1,950	2,340	1,603
6,271	2,569	227	1,587	1,246	642
3,224	1,269	127	660	635	533
2,425	844	63	337	527	654
5,183	1,177	64	413	763	2,767

1995	Family households			Nonfamily households	
		Other family			
Total	Married couple	Male householder	Female householder	Male householder	Female householder
	Owner households				
65,532	46,858	1,446	5,458	4,137	7,631
913	642	34	68	135	35
9,029	7,094	161	564	887	322
15,891	12,704	377	1,551	839	419
13,364	10,510	345	1,318	565	627
9,910	7,270	189	733	419	1,299
16,425	8,638	340	1,224	1,292	4,930
	Renter households				
32,840	12,302	917	5,777	6,564	7,282
3,786	1,352	135	609	879	811
10,158	4,434	242	1,814	2,177	1,491
6,960	2,851	252	1,761	1,384	713
3,984	1,569	157	816	784	659
2,409	838	63	335	524	649
5,543	1,258	68	442	816	2,959

baby bust generation's arrival at working ages.

Although the annual gain in households will be down from the record set in the 1970s, homeownership will surpass even what it was in the 1970s. Between 1983 and 1990, owners are projected to account for over 72 percent of household growth and that share is projected to surge to over 83 percent in the first half of the 1990s. With overall household growth slowing, however, the increase in ownership will boost the proportion of households that own their homes only to 66.6 percent by 1995. This will be a record high but not dramatically different from the 64.4 percent of 1980 and the 62.9 percent of 1970.

Homebuilders will have to be alert to housing requirements. Even though owners will account for over 83 percent of the growth in households between 1990 and 1995, this translates into a gain of only 882,000 owner households a year—fully one-quarter less than the 1.2 million average annual gain in homeowner households in the 1970s.

Builders of rental apartments face an even more drastic dropoff in demand. The number of renter households grew by more than half a million a year in the 1970s. The annual increase is projected to fall below 175,000 in the first half of the 1990s, when new household formation will be dominated by the baby bust generation.

The middle-aging of the baby boom generation is the force behind the rise in homeownership and—along with the baby bust generation—the drop in the demand for rental units. Households headed by 35-44-year-olds are dominating the growth in households in the 1980s. By the 1990s, the growth will be dominated by 45-54-year-olds and, as we have seen, homeownership rates in

Table 17. Projected Changes in Household Numbers, by Type, Tenure, and Age of Householder: 1983-1995

(Numbers in thousands)

		Family households				
			Other family		Nonfamily households	
Age of householder	Total	Married couple	Male householder	Female householder	Male householder	Female householder
			Change in owner households			
All householders	11,038	8,005	251	1,031	624	1,124
Under 25	-184	-117	-13	-12	-30	-15
25-34	44	34	-1	11	15	-16
35-44	4,742	3,809	114	448	250	120
45-54	3,839	3,011	105	389	164	171
55-64	-609	-439	-21	-44	-21	-84
65 and over	3,206	1,709	69	238	244	948
			Change in renter households			
All householders	3,417	1,247	96	734	563	778
Under 25	-811	-318	-17	-118	-192	-166
25-34	39	57	-12	2	2	-10
35-44	2,089	854	74	539	414	209
45-54	1,155	460	46	228	231	191
55-64	-146	-55	-11	-11	-38	-31
65 and over	1,092	249	17	94	146	585

Source: Table 16.

this age group come close to the peak of about 80 percent.

Renter rates, in contrast, are highest for younger people and these age groups are now on the decline. The number of 25-34-year-old householders (owners and renters combined) will shrink by 1.4 million between 1990 and 1995. But this age group will still be the prime market for rental housing, accounting for 10 million of the 33 million renter households projected for 1995.

Households maintained by the elderly, aged 65 and over, will increase by only 285,000 a year between 1990 and 1995, down by a third from the annual average gain of 420,000 from 1983 to 1990 and the lowest annual growth in this age group in more than half a century. By the 1990s, new additions to the ranks of the elderly will come from the generation born from the mid-1920s to the mid-1930s when annual numbers of births and birth rates sank—an early "birth dearth" generation that later became the "nesting" generation and spawned the baby boom.

As America becomes increasingly middle-aged, married-couple family households should make a marked comback, even if not enough to resurrect the family norm of the 1950s. Between 1970 and 1983, married couples increased by only 5.2 million, accounting for barely 25 percent of the total household gain during those years. From 1983 to 1995, however, we project that married-couple households (owners and renters combined) will increase by almost 9.3 million and account for 64 percent of the 14.5 million household gain during those years.

In contrast, the explosive growth of female-headed households, both family and nonfamily, should abate. Female-householder families grew by more than

3.2 million between 1970 and 1983 but should increase by less than 1.8 million from 1983 to 1995.

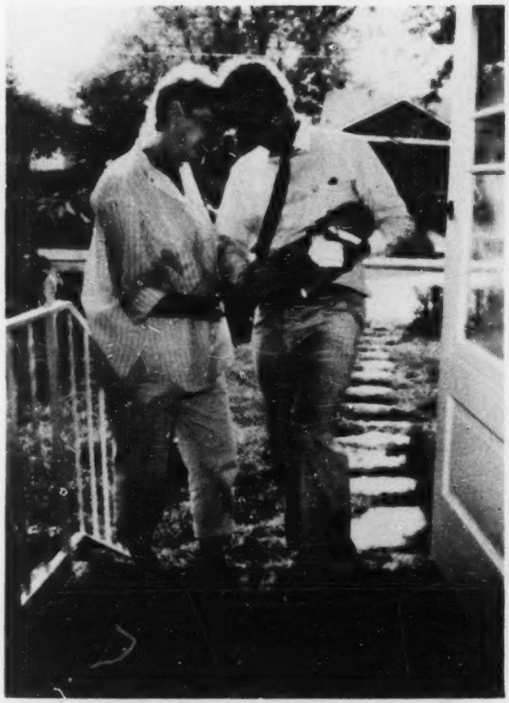
Baby boomers in the ages of expanding family, established family, and pre-empty nesthood will dominate the household life cycle stages in the 1990s. These were the prevailing singles and "mingles" of the 1970s, but their maturing promises a return to more conventional life styles and housing, once again reshaping housing demand.

The Shape of Housing to Come

Predicting just how much and what kinds of influence America's maturing housing demand will have on housing markets is risky. But broad parts of the picture seem clear.

Single-family detached homes

America's home of choice is the detached, single-family house. Despite the battering of the economy, the desire for such homes has remained constant. While the recession of the early 1980s brought condominiums and multifamily buildings back into the limelight, their share of the market has receded with returning prosperity. The recessions of 1974-75 and 1980-82 also saw a resurgence of compact houses, townhouses sharing walls with neighbors or smaller detached houses; the median size of new single-family housing units in 1980-82, for example, shrank to less than the 1,700 square foot median of units begun in the late 1970s. But each time, the median size of new houses rebounded and resumed its long-term upward path. We see nothing occurring in the next decade or so that should dampen Americans' desire for the best, most spacious, detached single-family home they can afford. The increased numbers of middle-aged Americans should ensure even greater popularity of this type of home.



Married-couple family households should make a marked comeback as America becomes increasingly middle-aged.

Upscale repeat buyers

Most likely to dominate the housing market by the early 1990s is the upscale repeat buyer. These will be households that bought condominiums or townhouses in the 1970s and 1980s or modestly priced, but cramped, transitional freestanding houses. As these householders age and their incomes grow, they will become buyers by choice rather than by necessity.

Tax issues

The tax reforms proposed by the Reagan administration in 1985 initially included measures to reduce income tax deductions allowed for mortage interest payments and real estate taxes on primary homes and to eliminate such deductions for second homes. The sheer size of the older, better-off age groups that will dominate the housing market suggests, however, that upscale housing will

Upscale housing will be in demand as baby boomers mature into their peak-earning years.

weather possible tax changes and, in fact, expenditures on primary homes could increase if investment in second homes becomes less attractive. The lower mortgage interest rates promised by tax reformers would also help make housing more affordable.

Focus of consumption

Rapid changes in communications and other technologies will boost the home as the primary setting for entertainment and consumption. High-tech media rooms, with projection TVs, VCRs, and cable links, have made quaint the old TV room and further threaten the theater industry. While the new electronic "cottage industries," that allow people to work at home while information commutes, may not catch hold as much as some observers predict, they are another illustration of the technological changes that are strengthening the role of the home in people's lives.

So too are luxurious life style extras that homebuilders will incorporate to lure people who already own homes into better homes: bedroom suites that offer spas rather than shower stalls, high-tech kitchens, and entertainment rooms. These will take space, so that if the economy cooperates, the average size of new housing units may well become larger than ever.

Consumers left behind

Not everyone will be able to afford upscale or even adequate housing. The younger baby boomers will have far less housing purchasing power than the older boomers who bought homes when prices and mortgage rates were lower, rode the inflationary wave of the late 1970s, and now have substantial equity in their homes. Workers employed in or laid off from declining "smokestack" industries and unable to acquire the skills needed for the new technological age will not be able to afford the housing to which workers trained for that age can aspire. Female-headed single-parent families also will continue to find it difficult to buy or rent affordable housing. From an overall perspective, however, this problem should diminish as the growth in female-headed families slows in the years to 1995.

This prospect is scant consolation for those who hope for renewed federal government housing aid for low-income families, particularly for rental housing.[3] With rising national affluence and a series of housing acts from 1949 to 1968, federal housing assistance and the quality of housing for the poor improved markedly to the early 1970s. The emphasis then shifted from mass construction of housing for the poor, as proposed by the act of 1968, to subsidized rentals of existing housing under the Section 8 program of 1974. By 1980, however, federal housing subsidies assisted at most 4 million households of low-to-moderate income. This was only 5 percent of the nation's households and included barely a third of households below the poverty level. In 1981 new federal construction of housing for the poor was virtually halted and new commitments for rental assistance under the Section 8 program were drastically reduced. With the budget cuts mandated by the balanced-budget legislation passed in December 1985, renewed federal housing aid for the poor is unlikely for the foreseeable future.

As a result, rapidly increasing numbers of people are homeless, doubling up in public housing projects, or paying more than half their incomes for rent. Compounding the problem is the general decline in rental housing. Between 1982 and 1985 in New York City, for example, rental units declined by nearly 36,000, largely because of conversions to cooperatives and condominiums, which people on low incomes cannot afford.[4]

Most affected is America's growing minority population of blacks and Hispanics. The decline in numbers of newcomers to the labor force could provide more job opportunities and better incomes for minorities but it could also mean more class cleavage between those equipped for the new jobs becoming available and those who are not. This could deepen the divide between people desperate to acquire adequate shelter and those who can afford to view housing as much more than mere shelter.

In the absence of federal efforts, housing support for the poor is increasingly local. San Francisco and Boston now assess developers of office space $5 per square foot which goes into city funds to provide housing for the poor. Orange County, California, and the state of New Jersey have passed laws requiring that 20 percent of new largescale commercial housing projects be provided at subsidized prices for low- and moderate-income occupants or housing of equivalent value made available offsite, but these laws are now being challenged in court. Local nonprofit groups are making promising, though so far modest, efforts to rehabilitate existing housing or convert nonresidential buildings to meet the housing needs of the poor.

The drop in new housing construction that is likely over the next decade as household formation slows could reduce the supply of housing eventually available for the poor—a process that traditionally has been the most important source of shelter for the least affluent members of American society. This could be offset by more rehabilitation of existing housing. There is evidence that demolitions or abandonments—removals of dwelling units from the inventory—have dropped to perhaps as low as 250,000 to 300,000 a year, compared to possibly twice this number in the 1950s and 1960s. This further reduces the need for new construction. Homebuilders and mortgage lenders seeking to keep up the market for new housing could usefully join forces with the poor and minority groups and their housing needs.

If the housing needs of the disadvantaged are not met by new construction or substantial rehabilitation, the response of the housing market may well be much more subdivision of existing housing. This may be justified in light of the declining average size of households but it would not be adequate to meet the needs of the poor and the quality of housing available to them would be bound to deteriorate.

A further problem for America's blacks in obtaining adequate housing is the continuing resistance they face in gaining acceptance in white-dominated neighborhoods. Progress toward integrated housing has lagged far behind acceptance of equal rights in the workplace. Because of the faster growth of the black population, however, it is evident that the pressures and need for integrated neighborhoods will increase. As of 1984, one in nine U.S. households were white; by the turn of the century, the figure is likely to be one in eight. This alone indicates that shifts of housing from white to black occupancy will have to occur more rapidly in the future.

New housing geography

How much gentrification has taken place in America's central cities is a matter of dispute. But it is clearly linked with young adults in the early stages of the household life cycle. With changing demographics, gentrification is bound to diminish unless central cities can increase their attraction for maturing families. With the middle-aging of America and resurgence in child-centered families, suburbia and exurbia are likely to grow even more popular. Already in 1984, 44 percent of the U.S. population lived in suburbs, compared with 32 percent in central cities and 24 percent outside metropolitan areas. The 1.3 percent population growth rate of suburbs between 1980 and 1984 was more than twice the 0.6 percent growth rate of central cities.[5]

Families will continue to prefer housing located within reasonable commuting distance of the jobs of their, usually, two or more workers. This should help maintain the economic vitality of central cities, but office buildings and light industry have followed population so that employment growth is now fastest around suburban rings; twice as many workers now commute within the suburbs as from suburb to central city.

Rising incomes

A healthy market ultimately depends on the capacity of households to purchase shelter. The housing train is switched to the fast track by robust incomes and detained by faltering incomes. We envisage one of two income scenarios unfolding in the next decade or so. In one scenario, the housing market will suffer recession and retrenchment. In the other, it will prosper.

The unlucky scenario is one in which the sluggish, erratic economy of 1973-82 and decline in real family income during the past decade are evidence that America has moved past its economic prime. The productive pie will fail to expand sufficiently to allow meaningful growth in household income.

The happy scenario is one in which the maturing of the baby boom generation leads to growing national affluence and a greater demand for housing. We believe this is the more likely scenario.

As people mature, so do their incomes. A baby boom generation in its peak-earning ages of 35-54 will propel America into affluence in the 1990s. Reinforcing this will be the emerging household patterns. Married-couple family households headed by householders aged 35-54 have the highest of family incomes, as seen in the data for 1983 shown in Table 18, and this has been true over time. And it is married-couple family households in this age bracket that are projected to account for 8.1 million, or 56 percent, of the 14.5 million increase in total households between 1983 and 1995 (see Table 17, page 28).

It is these factors that make our predictions of real household income growth, increasing national affluence, and a flourishing housing market seem

Table 18. Median Family Income, by Family Type and Age of Householder: 1983

Age of householder	Family household type			
			Other family	
	Total	Married couple	Male householder	Female householder
All householders	$24,580	$27,286	$21,845	$11,789
15-24	13,841	16,660	16,036	4,910
25-34	22,776	25,970	18,868	8,109
35-44	28,944	32,591	22,790	13,633
45-54	32,592	35,872	29,107	16,167
55-64	27,407	29,171	25,078	15,953
65 and over	16,862	17,263	18,329	14,192

Source: Bureau of the Census, "Money Income of Households, Families, and Persons in the United States: 1983," *Current Population Reports*, Series P-60, No. 146, April 1985, Table 23.

likely. More fertile with income than with offspring, the maturing baby generation will edge the housing market further upscale. They will have the purchasing power that could bolster a housing industry that faces an inevitable decline in the numbers of households added each year.

The demographic changes of the next decade may be more favorable for family and household income growth than at any time since the mid-1960s. But will the economy provide enough high-velocity careers for the massive baby boom generation to replicate the traditional rise in income with age? How many households can actually expect to see a steep rise in their earnings? Could the weight of sheer numbers of people in the middle-aging labor force flatten the rise in earnings and incomes?

The constraints of the 1973-82 economy remain a sober warning, despite the recovery of 1983-85. Nevertheless, our conclusion is that the major demographic factors are in place to promise a bright future for housing in America over the next decade or so, barring unforeseen calamities. ☐

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World Population in Transition

By Thomas W. Merrick,
with PRB staff

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Abstract—The world's population growth rate peaked at slightly over 2 percent a year in the late 1960s and in 1986 is down to 1.7 percent and falling. Annual numbers added continue to mount because these rates apply to a very large base, 4.9 billion in 1986, but will peak at 89 million a year in the late 1990s and then also taper off until world population stabilizes in the last decade of the 21st century at about 10.2 billion, according to current United Nations medium variant projections. Close to 95 percent of this growth is occurring in the less developed countries (LDCs) of Africa, Asia (minus Japan), and Latin America, now comprising 76 percent of world population. LDC fertility rates are declining, except in sub-Saharan Africa and parts of Latin America and South Asia, but most have far to go to reach the replacement level of 2.1 births per woman, although China, the world's population leader at 1.05 billion in 1986, reached that level in 1984. Fertility is below replacement in virtually all more developed countries and a few are already experiencing natural decrease (fewer births than deaths). For LDCs, large numbers will be added before stabilization even after attainment of replacement level fertility because of the demographic momentum built into their large and young population bases. This complicates efforts to bridge gaps in living standards between LDCs and industrialized countries. From a new debate about whether rapid population growth deters or stimulates economic growth a more integrated view sees efforts to slow population growth and other development efforts to improve people's health and education, upgrade women's status, etc., as complementary. Most effective in the increased contraceptive prevalence and fertility declines seen in many LDCs has been the combination of organized programs to increase access to family planning information and supplies with socioeconomic development that enhances the desire for smaller families.

Editor: Jean van der Tak Graphics: George Hager

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POPULATION BULLETIN
Vol. 41, No. 2, April 1986

A mother and child in Mauritania. Fertility rates and population growth rates are still high in sub-Saharan Africa and parts of Latin America and South Asia, but are declining in most of the less developed regions that now comprise 76 percent of world population.

World Population in Transition

By **Thomas W. Merrick,** with PRB staff

Thomas Merrick is President of the Population Reference Bureau. Formerly, he was Director of the Center for Population Research at Georgetown University, where he continues to teach. He has served with the Ford Foundation in Brazil and as consultant to a variety of international agencies.

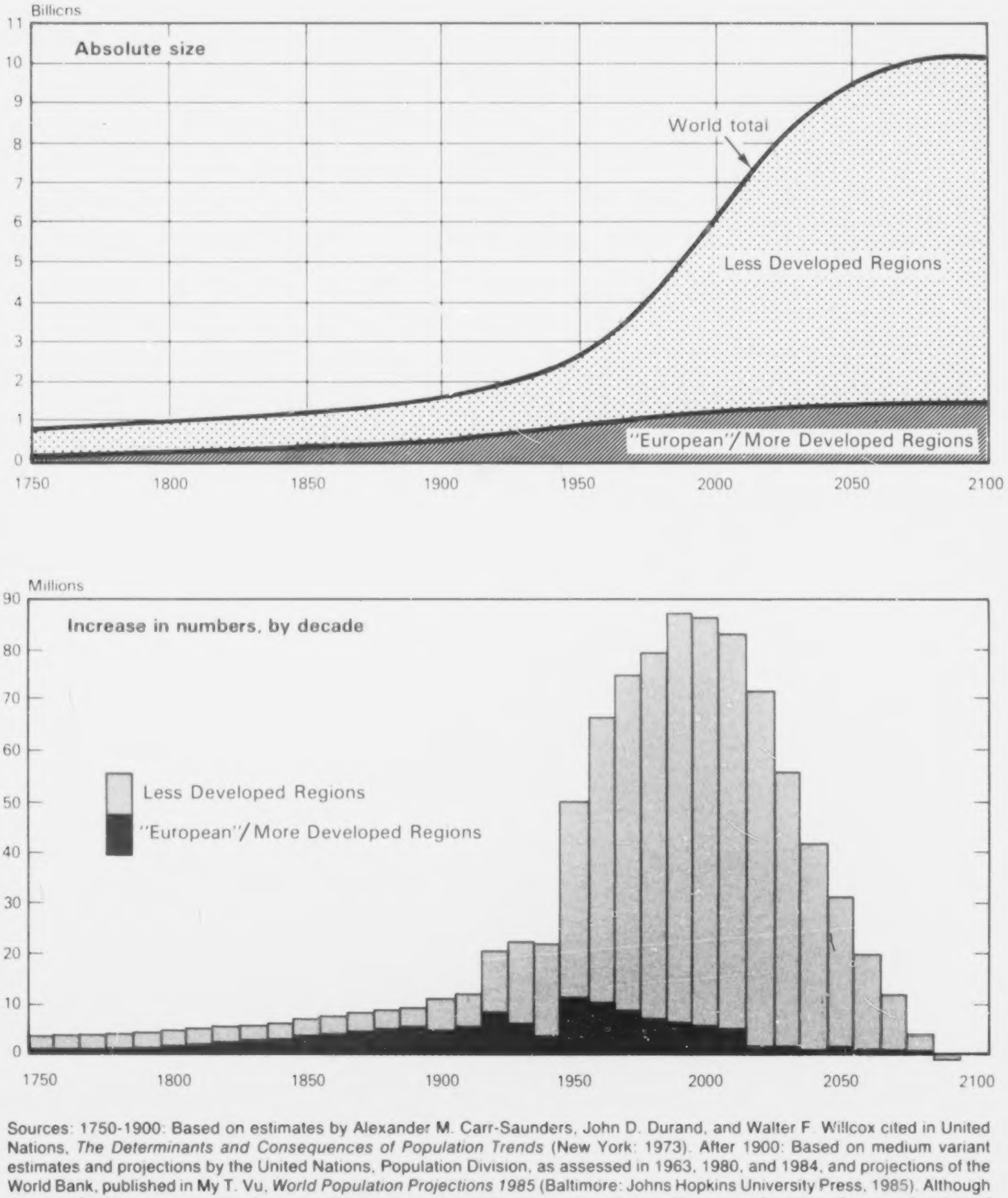
Carl Haub, Director of Demographic Analysis and Public Information at PRB, Mary M. Kent, Research Demographer, and Jean van der Tak, Senior Editor, contributed to the Bulletin. *A special section features illuminating observations by experts on "Five Key Countries in the World Population Outlook": Judith Banister (U.S. Bureau of the Census) on China; Arjun Adlakha (Bureau of the Census) on India; Edward K. Brown (World Bank) on Nigeria; Eduardo E. Arriaga (Bureau of the Census) on Mexico; and Carl Haub on West Germany.*

Human demographic history has reached an important turning point. World population in the spring of 1986 stands at about 4.9 billion and is growing by about 1.7 percent a year—the difference between global birth and death rates. After accelerating for more than two centuries, the annual *rate* of world population growth is slowing; today's rate of 1.7 percent is down from a peak of about 2.04 percent in the late 1960s and is expected to continue to decline, to between 1.4 and 1.5 percent in 2000 and zero toward the end of the 21st century, according to the United Nations. For most of the past and also for most of future human history, world population increase was and will be limited, both relatively and absolutely.

Annual increases in the *absolute size* of world population have also been growing for more than two centuries and since the end of World War II have reached numbers that are enormous by historical standards. Currently, some 83 million people are added to the world's population each year. In the ten years from 1975 to 1985, world population grew by about 760 million, a number equal to the estimated *total* world population in 1750. Even though the annual growth *rate* of world population is now declining, the *numbers added* each year are likely to increase for at least another decade, because the size of the base population to which this growth rate applies has become so large. According to the latest, 1984, medium variant assessments of the United Nations, numbers added to world population will average 86 million a year from 1990 to 1995 and reach a peak of 89 million a year, on average, between 1995 and 2000. In the year 2000 world population is projected to be 6.1 billion. After that, annual numbers added will be increasingly smaller until world population eventually stabilizes (see Figure 1, bottom panel, next page). The U.N.'s most recent long-range medium projection, prepared in 1980, puts this in the last decade of the 21st century at a total of about 10.2 billion (see Table 1, page 12).

Before the 18th century, high birth rates were nearly matched by high death rates and world population grew very slowly. There were periods of regional growth, but these were generally offset by declines, which were sometimes catastrophic, such as the plummet in Europe's population caused by massive numbers of deaths

Figure 1. Population Growth, 1750-2100: World, Less Developed Regions, and "European"/More Developed Regions



Sources: 1750-1900: Based on estimates by Alexander M. Carr-Saunders, John D. Durand, and Walter F. Willcox cited in United Nations, *The Determinants and Consequences of Population Trends* (New York: 1973). After 1900: Based on medium variant estimates and projections by the United Nations, Population Division, as assessed in 1963, 1980, and 1984, and projections of the World Bank, published in My T. Vu, *World Population Projections 1985* (Baltimore: Johns Hopkins University Press, 1985). Although the use of various sources introduces small inconsistencies in the time series, the resulting general pattern of past and projected population growth should give a satisfactory picture of world population trends.

Note: Three less developed regions = Africa, Asia (minus Japan), and Latin America; Two "European"/More developed regions = Europe, U.S.S.R., Japan, and Oceania (including Australia and New Zealand) combined and North America (Canada and the U.S.). See also Table 1, page 12.

during the plagues and famines of the 14th century. Globally, however, both relative and absolute increases were very small until the 1700s. That was when the first modern increase of world population began, as death rates began to decline. This increase was led by Europeans, both those living in Europe and those who settled in the Americas, Oceania (Australia and New Zealand), and other colonial areas. The European-based increase lasted for about 200 years. It was substantial by comparison with previous experience but moderate in relation to what has occurred recently.

After World War II, population growth rates accelerated dramatically in the less developed regions of Africa, Asia (minus Japan), and Latin America. There was also a modest population surge in a few industrialized countries which, like the United States, experienced a prolonged postwar "baby boom." As shown in Figure 1, recent population growth in the three less developed regions has been far greater than any ever experienced in the two "European" more developed regions shown in the figure—Europe, present-day U.S.S.R., Japan, and Oceania combined, and North America (Canada and the United States). The less developed regions' population bases were already large at the beginning of the post-World War II surge and during the surge, their rates of natural increase (births minus deaths) surpassed any ever experienced in regions settled by Europeans because birth rates were initially higher and declines in death rates more rapid, telescoping into a few years a population growth acceleration process that took decades in European countries. Since the less developed regions now make up over three-quarters of world population, the result has been global population increase that dwarfs any in previous human demographic history.

The current experience is also likely to be unique. Natural increase is very low in most developed countries and even negative in some Western European countries, such as West Germany, where birth rates are now lower than death rates. In the U.S., natural increase is now down to about 0.7 percent a year and immigration plays an increasing role in the country's population growth. Population growth rates have also begun to decline in many developing countries. The fertility rate of China, the world's most populous country at an estimated 1.05 billion at mid-1986, was down to the replacement level of 2.1 births per woman by 1984, which foretells an eventual end to China's population growth (see Box 1, page 6). Fertility rates have fallen by a quarter or more over the past decade in such populous Latin American and Asian countries as Brazil, Mexico, Indonesia, and Thailand. These countries still have a long way to go before births and deaths are in balance and population stabilizes, but the signs of change are strong. High growth rates persist mainly in Africa and a few low-income countries of South Asia and Latin America.

Declining or even replacement level fertility does not spell an immediate end to population growth. The reason for this is population momentum (see Box 1). While fertility *rates per woman* decline, *numbers* of births continue to grow because the numbers of new mothers grow as an echo effect of past increases in births. Only after this echo effect works itself through a population's age structure does a population stop growing. While this is happening, a country with a large population base will experience very large absolute population increases, despite declining birth rates. China is a good example. Currently, China has some 270 million women of reproductive age. If each of these women were to have just two children, more than half a billion people (allowing for some mortality in childhood) would be added to China's one billion population. It was this realization that prompted the country's leadership in 1979 to establish a policy of one child per family, to be pursued for one generation, in the hope of speeding up the goal of population stabilization.

Because of population momentum, the absolute size of world population will grow

Box 1. Population Replacement and Momentum

A population just reproduces itself when individual couples have just the number of children needed to replace themselves, allowing for some mortality in childhood. In most populations this comes to about 2.1 children per couple, or per woman. With an average higher than 2.1 children, a population will experience natural increase (more births than deaths); with less than 2.1, natural decrease. For that reason, a fertility rate of 2.1 is considered to be at the *replacement* level.

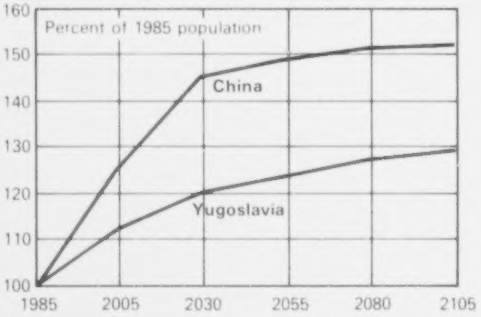
When the average fertility rate of a population reaches the replacement threshold, one would expect births and deaths to be in balance. Eventually they will be, but not immediately. The reason for this is demographic *momentum*. Demographic momentum derives from the age structure of a population that is experiencing fertility decline. A population's age structure reflects its past pattern of demographic events—mortality, migration, and, especially, fertility (see Box 3, page 19).

A population that has had very high fertility in the years before reaching replacement level fertility will have a much "younger" age structure than a population with lower fertility before crossing the replacement threshold. The proportion of young people in a population approaching replacement level fertility is important because the size of the largest recently born generation as well as the size of the parent generation determines the ultimate size of the total population when births and deaths are finally in balance. Even after replacement level fertility is reached, births will continue to outstrip deaths so long as the generation that is producing births is disproportionately larger than the older generation where most deaths occur.

A comparison of two populations crossing the replacement level threshold reveals that the one with prior higher fertility and, thus, a younger age structure will experience greater increases in population before births and deaths come into balance and the population stabilizes. China, with a 1985 population of 1.04 billion and 34 percent under age 15, is among the handful of less developed countries with fertility even close to replacement level. China's total fertility rate was 5 to 6 births per woman as late as the early 1970s but dropped precipitously to 2.1 births per woman in 1984. Even with its aggressive fertility control program, China's population is expected to increase by 135 million (13 percent) during the decade from 1985 to 1995 and to grow to 1.57 billion (a 51 percent increase over 1985) before stabilizing. Yugoslavia also recently reached replacement level fertility, but down only from a total fertility rate of 2 to 3 births per woman. Some 24 percent of its 1985 population of about 23 million was under age 15. The population is projected to increase by about 1.5 million (7 percent) from 1985 to 1995 and stabilize at about 30 million (30 percent over 1985) at the end of the next century.

While the momentum potential in China is high by comparison with that of Yugoslavia, it is low compared to that of many sub-Saharan African countries where high fertility has resulted in populations with 45 percent or more currently under age 15.

Population Momentum, 1985 to Stabilization: China and Yugoslavia



Source: World Bank projections

enormously over the next few decades. The U.N.'s medium projections of 1984 imply increases of more than 800 million people per decade in the four decades from 1985 to 2025 (see Table 1, page 12). Over 90 percent of these increases will occur in the less developed regions, mainly in Africa and Asia. Eventually, possibly after the middle of the next century, growth will subside and world population will stabilize.

Sustained population increases of

these magnitudes raise important challenges as well as major opportunities for human society. The challenges arise from pressures of increased numbers on resources, the environment, and traditional ways of earning a livelihood. The fact that so much of the growth is coming in the developing countries is a further challenge, because it coincides with these countries' efforts to bridge the large gaps in living standards between themselves and more developed countries.

The same pressures also create opportunities. Many of the adaptations in productive techniques and organization that led to the Industrial Revolution in Europe were, in part, responses to population pressures associated with the European-based increase of world population. One way that societies adapt to population pressures on resources is by developing technology to use resources more efficiently. They also reorganize to use productive methods that will support more people, with urbanization, for example, and the factory system of production. These changes generate feedbacks on demographic processes. The small-family norm is itself a product of the shift to urban living and the increased education required by modern economies. Urban-based mass markets have played an important role in the diffusion of contraception and, hence, in fertility declines.

To be sure, not all responses to population pressures have been positive. History provides a litany of plagues, famines, and wars associated with population increases that exceeded the capacity of particular localities to sustain them. For developing countries, the challenge is to adopt and adapt for their own development needs the "modern" technology and organization that brought high living standards to more developed countries and to do this in the face of very large population increases. Time is a critical factor for the poorest countries. Each decade of population growth at current numbers makes it more difficult for them to bridge the gap between themselves and the more developed countries.

Migration is another way of adapting to population pressures. Historically, movements of people in response to population pressures on land provided an escape valve for many European countries. Migration from hard-pressed rural areas fed the growth both of European cities and of populations in countries where European emigrants settled. Migration has also been an important demographic response to growing population pressures in today's developing countries. Third World cities are expected to absorb most of projected population growth and international migration of Third World peoples has increased substantially in the past two decades. These movements have important political, economic, and social impacts on both sending and receiving regions.

World population is on the path toward stabilization. Responses to population growth between now and the time stabilization occurs will shape the kind of world that future generations share. Basic living standards for large segments of the world's people hang in the balance. The impact will be greatest in less developed countries, but more developed countries will find it difficult to insulate themselves from the process, even if they try. Pessimists feel that population growth is swamping less developed countries' efforts to raise living standards. They see ominous signs that the failure of development will spill over into more developed countries through political strife and economic chaos. Those who take a more optimistic view see important signs of positive change and important precedents for change in the history of today's more developed countries. Ultimately, history will provide answers to the many questions about the impact on economic and social development of population increases of such unprecedented magnitudes.

This *Bulletin* provides a perspective on world population trends and their implications for more and less developed countries to the extent that these can be ascertained in the mid-1980s. It presents data on trends to the present and projections for the future, reviews theories and empirical evidence on the causes and consequences of population growth, and discusses their implications for public policy.

World Population Trends and Prospects

Premodern growth: before 1750

Few countries conducted censuses before 1900 and despite efforts begun after World War II, 100 percent census coverage of the world's population has not yet been achieved. Demographers have thus had to rely on administrative records and other evidence to piece together estimates of population size in the past. For the distant and even not-so-distant past, estimates have been based on speculation about the numbers that could be supported in particular ecological settings at presumed levels of social and technological development. These estimates have been supplemented by records from secular and ecclesiastical sources and surviving contemporary observations.

One of the earliest benchmarks in estimates of world population is the agricultural revolution beginning about 10,000 years ago when humans shifted from food gathering and hunting to food growing and domestication of animals. Before that, it is estimated that a population of 5 to 10 million could have been supported. The agricultural revolution precipitated a population expansion that was pale by modern standards but large relative to previous experience.[1]

For the beginning of the Christian era, 1 A.D., another benchmark, estimates of world population range from 270 to 330 million.[2] For 1,000 A.D., the estimates are not much higher, 275 to 345 million, because of the likely demographic impact of the disruptions during and after the fall of the Roman Empire in the fifth century. World population growth rates then increased slightly, but with some major setbacks, most notably with the Black Plague that devastated Europe's population in the 1340s and 1350s.

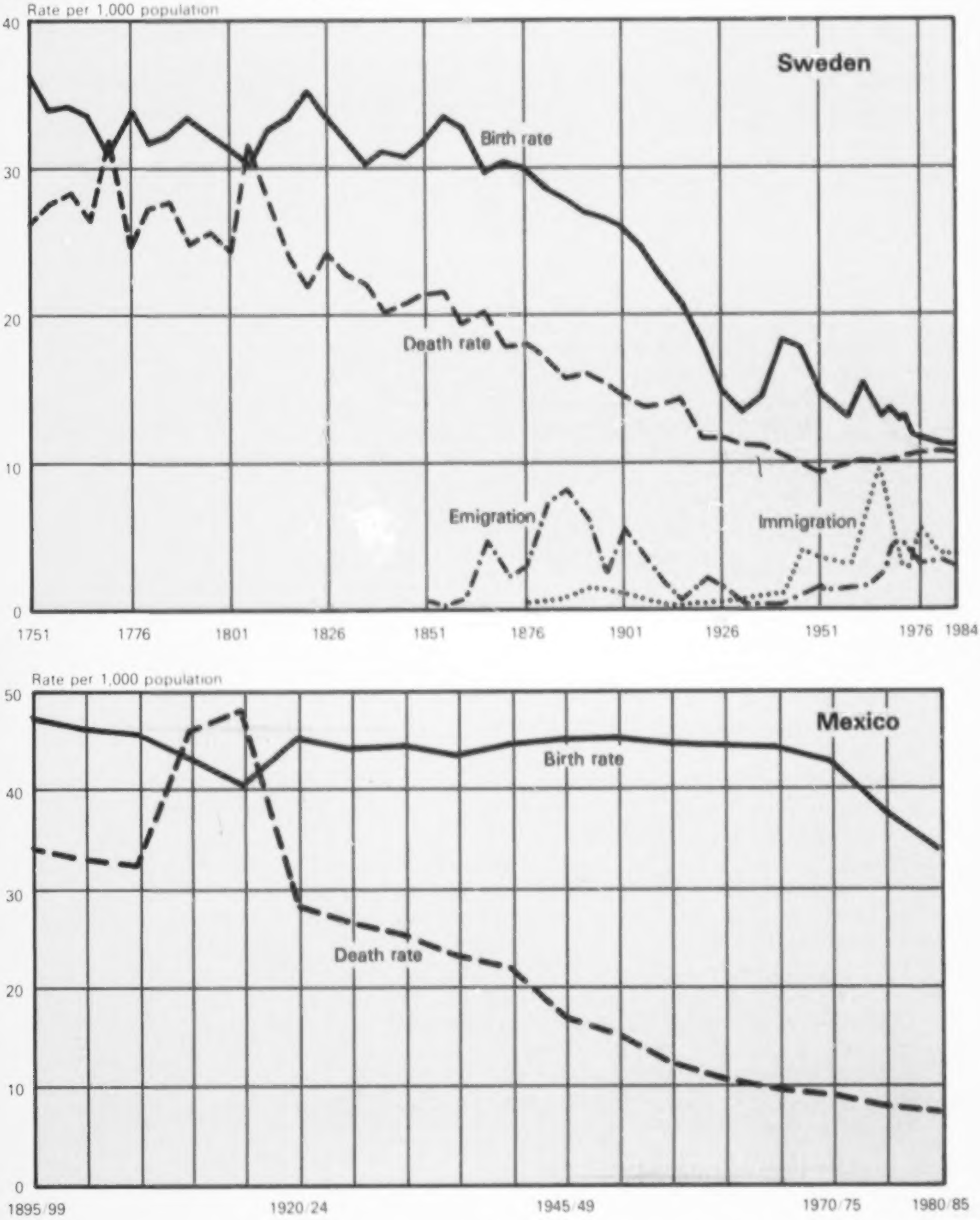
Fertility was high during this premodern era, which represents most of human history, though nowhere close to human capacity, because of poor health and nutrition and the restrictions of cultural practices and taboos. High fertility was balanced by high mortality—during infancy and early childhood, among women during childbirth, and from diseases and illnesses from which modern populations normally recover. Added to this were episodes of catastrophic mortality during epidemics, crop failures, famines, and wars. Population grew at times in particular regions but eventually declined when environmental conditions or resources could no longer sustain the increase in numbers.

For 1750, often used as the benchmark for the beginning of the first modern expansion of world population, demographer John Durand reports estimates of 735 to 805 million.[3] Then, as now, Asia accounted for the largest share, an estimated 60 percent. Europe, including the present territory of the Soviet Union, represented another 24 percent, followed by Africa, with about 13 percent. North and South America made up only about 2 percent of the world total, less than in 1500 because their indigenous populations had by then been decimated by diseases introduced by Europeans and by wars and oppressive living conditions.

European expansion: 1750-1950

The pattern of birth and death rates shown in Figure 2 (top panel) for Sweden, which has a longer record of vital statistics than almost any other country, was typical of most European countries after 1750 and countries where Europeans settled, though the timing varied.

Figure 2. Birth and Death Rates: Sweden, 1751-1984, and Mexico, 1895/99-1980/85



Sources: Sweden: Statistics Sweden, *1986 Statistical Yearbook* (Stockholm: 1985); Mexico: 1895-1970: Francisco Alba-Hernandez, *The Population of Mexico* (Mexico: Center of Economic and Demographic Studies, El Colegio de Mexico, 1976); 1970-1985: United Nations, Population Division, *Demographic Indicators by Countries as Assessed in 1984*, New York, December 1985, computer printout.

Before the 19th century, birth and death rates still fluctuated widely, with spurts of population growth, followed by slower growth and even declines, as during famines at the beginning of the 19th century. The death rate then began a sustained decline while the birth rate remained above 30 per 1,000 population until the 1880s. The lag between the declines in birth and death rates brought a gradual rise in natural increase, as happened in most Northwestern European countries during the 19th century and in Southern and Eastern Europe in the early 20th century. In Sweden, the ensuing decline in population growth was even more marked than the decline in natural increase because of heavy emigration between 1860 and 1914. Sweden's population growth has been very low since the 1930s and its births and deaths are now virtually in balance.

Demographers call Sweden's experience from 1750 to 1950 a "demographic transition": a shift from slow population growth because both birth and death rates are high to slow growth with both rates at low levels. In between, population growth first rises as birth rates remain high while death rates decline and then slows when birth rates also start to decline.

The term "demographic transition" is also used to characterize relationships between birth and death rate declines and changing social and economic conditions. Mortality declines during the European transition are attributed mostly to improved living conditions, particularly better diets and sanitation.[4] Medical advances, such as vaccines and drugs, came comparatively late in the transition and helped control and eventually eradicate—or nearly eradicate—many infectious diseases.

The explanation of fertility declines is more complex. The "classic" demographic transition theory holds that the small-family norm is prompted by a society's shift from a rural-agrarian economy to an urban-based economy where manufacturing and services are the main activities. However, there are many exceptions to this model. In Europe, the beginning of France's fertility decline, in the late 18th century, preceded urbanization and industrialization, while the start of England's decline, a century later, came well after. This has led researchers to investigate the impact of other factors that appear to be relevant: cultural influences on attitudes about childbearing, how the idea of birth control is diffused, and the impact of improvements in women's status, particularly education.[5] Much of Europe's fertility transition took place before modern contraceptives were developed.

With the rise in growth rates, world population increase between 1750 and 1950 far outstripped any previous upturn. This was bolstered by new technologies and forms of social and economic organization that made possible the support of many more people. Global numbers passed the one billion mark during the early 1800s, added another billion by 1930, and the third by 1960.

Europe's population growth made its impact through emigration to countries in North and South America, Oceania, and Africa where Europeans settled. Although Europe, the U.S.S.R., the two Americas, Japan, and Oceania accounted for only 27 percent of world population in 1750, this had increased to 40 percent by 1950 and the combined shares of Africa and Asia had fallen from 73 to 60 percent, because 37 percent of world population growth in these two centuries occurred in Europe or in regions where Europeans settled (see Table 1, page 12). Asia (minus Japan) still added the most numbers between 1750 and 1950, 837 million, because its population was so large to begin with—455 million in 1750.

Third World growth: 1950-1985

The second, far larger modern wave of world population growth—a near doubling from about 2.5 billion in 1950 to over 4.8 billion in 1985—was fueled by the surge in the growth rates of developing countries to levels far higher than rates during the European-based expansion and the fact that these rates applied to populations that were already large in 1950. Of the some 2.3 billion addition to world population in these 35 years, Asia accounted for 61 percent and Africa and Latin America for another 25 percent; only 14 percent was contributed by Europe (including the Soviet Union), North America (Canada and the U.S.), Japan, and Oceania combined (Table 1). Asia (minus Japan) made up 51 percent of world population in 1950 and Africa and Latin America made up 16 percent; by 1985 their combined share was up to 76 percent, reducing the share of the two more developed regions to 24 percent.

Rapidly declining death rates coupled with continued high birth rates caused the rapid acceleration of population growth rates in less developed countries (LDCs). Until the early 20th century, annual death rates in countries untouched by the European-spawned mortality decline were well over 30 per 1,000 population, comparable to rates in Europe in the mid-1700s. In the next 40 years, LDC death rates declined gradually as sanitation improved and advances in medicine and techniques for controlling infectious disease that contributed to the final phase of the European mortality decline spread slowly to non-European areas, particularly port cities with enclaves of European residents. Even so, LDC death rates were still double or more the rates of industrialized countries on the eve of World War II.

Rapid LDC mortality declines after World War II were due mostly to the development of systems for delivery of existing medical technologies to large numbers of people through mass vaccination, immunization, insecticide-spraying, etc., much of it an outgrowth of wartime efforts to keep the armed forces of industrialized countries healthy in tropical areas. By 1960 death rates in most Latin American and Asian countries were down to those of Europe, and sometimes lower, because LDCs have much higher proportions of young people whose death rates are normally low. Only Africa and South Asian countries like India, Bangladesh, Nepal, and Pakistan lagged behind.

In the meantime, birth rates remained high. In fact, they were generally in the high 40s per 1,000 population, well above the average 30-35 per 1,000 of European rates before their decline, because marriage occurred at an earlier age and was more universal than in Europe. As a result, population growth rates in many LDCs exceeded 3 percent a year by the late 1950s, more than twice the rates of any European countries at the height of their transitional population growth phase.

Mexico's experience is illustrative, particularly compared to Sweden's (Figure 2, page 9). Death rates in Mexico were over 30 per 1,000 population before 1910, rose close to 50 during the decade of revolution and civil war from 1910 to 1920, were still in the 20s in the mid-1930s, and then declined—first slowly and faster after 1945. By the early 1960s, the death rate was around 10 per 1,000 population. The birth rate, by contrast, hovered well above 40 per 1,000 population until the early 1940s, in part because the mortality decline occurred mainly among young children and mothers, which added to the nation's fertility potential by increasing the number of surviving mothers.

Most Latin American countries had a similar experience. That region led LDCs in death rate declines, followed by East Asia (China, Korea, Taiwan, etc.), South Asia, and only recently, Africa. Latin America's birth rates remained higher for a longer time so its overall rate of population growth was highest of LDC regions in the 1950s and 1960s. Since the mid-1960s, birth rates have come down in Latin America and especially in East Asia, mainly because of the precipitous drop in fertility since 1970 in China, which accounts for such a large share of that region's total population. Population growth rates have fallen since 1970 in all LDC regions except sub-Saharan Africa, where declining death rates coupled with still high birth rates

Table 1. Population Growth, 1750-2100: World and Five Major Regions

(Numbers in millions)

	Total population					
	1750		1900		1950	
Region	Number	Percent	Number	Percent	Number	Percent
World total	760	100.0	1,630	100.0	2,516	100.0
Less developed regions	569	74.9	1,070	65.6	1,681	66.8
Africa	100	13.2	133	8.2	224	8.9
Asia (minus Japan)	455	59.9	867	53.2	1,292	51.4
Latin America	14	1.8	70	4.3	165	6.6
"European"/More developed regions	191	25.1	560	34.4	835	33.2
Europe, USSR, Japan, Oceania[a]	189	24.9	478	29.3	669	26.6
North America[b]	2	0.3	82	5.0	166	6.6

	Absolute and percent increase during periods					
	1750-1950		1950-1985		1985-2025	
	Number	Percent	Number	Percent	Number	Percent
World total	1,756	231.1	2,321	92.2	3,369	69.7
Less developed regions	1,112	195.4	1,976	117.5	3,142	85.9
Africa	124	124.0	331	147.8	1,062	191.4
Asia (minus Japan)	837	184.0	1,405	108.7	1,706	63.3
Latin America	151	1,078.6	240	145.5	374	92.3
"European"/More developed regions	644	337.2	346	41.4	226	19.1
Europe, USSR, Japan, Oceania[a]	480	254.0	248	37.1	145	15.8
North America[b]	164	8,200.0	98	59.0	81	30.7

Sources: See Figure 1.

[a] Oceania includes Australia and New Zealand.
[b] North America = Canada and the U.S.

have boosted population growth to about 3 percent a year, as in the other regions two decades earlier.

Slower growth/larger increases: 1985-2025

Growth rates around the world should continue to drop over the coming decades (see Figure 1, Table 1, and Box 2, page 14). Even African rates are expected to pass their peak by the end of this century. The principal question is how rapid the declines will be and this depends on birth rate trends. Birth rates in many LDC countries fell faster than expected during the late 1960s and 1970s, but in Costa Rica, Korea, Sri Lanka, and Tunisia, for example, declines have stalled at fertility levels notably higher than the replacement level of two births per woman that would eventually end population growth.[6] Except for sub-Saharan Africa, death rates in most LDCs are now as low or lower than in more developed countries and what further decline may occur will not dampen the effect of falling birth rates on overall growth rates. It is also possible that death rates could rise if economic and social

1985		2000		2025		2100	
Number	Percent	Number	Percent	Number	Percent	Number	Percent
4,837	100.0	6,122	100.0	8,206	100.0	10,185	100.0
3,657	75.6	4,837	79.0	6,799	82.9	8,748	85.9
555	11.5	872	14.2	1,617	19.7	2,591	25.4
2,697	55.8	3,419	55.8	4,403	53.7	4,919	48.3
405	8.4	546	8.9	779	9.5	1,238	12.2
1,181	24.4	1,284	21.0	1,407	17.1	1,437	14.1
917	19.0	987	16.1	1,062	12.9	1,055	10.4
264	5.5	297	4.9	345	4.2	382	3.8

2025-2100	
Number	Percent
1,979	24.1
1,949	28.7
974	60.2
516	11.7
459	58.9
30	2.1
−7	−0.7
37	10.7

conditions deteriorate in some of the world's troubled areas.

Despite declining LDC growth rates, these rates are building on the very large population bases accumulated over the last few decades, so absolute increases in world population will grow, from 757 million in the 1970s, to 796 million in the 1980s, and 876 million during the 1990s, according to the U.N. 1984 medium projections, followed by a gradual tapering off in the 21st century. The U.N. medium projections put world population at 6.1 billion in 2000, as noted, and 8.2 billion in 2025.

Of the projected 3.4 billion addition to world population between 1985 and 2025, 3.1 billion, or 93 percent, occurs in Africa, Asia, and Latin America, increasing their share of global numbers to 83 percent, and reducing that of North America, Europe, the U.S.S.R., Japan, and Oceania from 24 percent in 1985 to just 17 percent in 2025 (Table 1). The largest absolute increase, 1.7 billion, is projected for Asia, again reflecting its large population base. But Asia's percentage growth in the 40-year projections, 63 percent, is below the overall average, 70 percent. Thus Asia's share of total world population drops from 56 to 54 percent.

Relative growth in Africa and Latin America is projected to top the world average by a large margin. Africa is projected to add 1.1 billion people, reaching 1.6 billion in 2025, triple the 555 million of 1985. Latin America's projected gain is 374 million, to 779 million in 2025, close to double 1985's 405 million. Africa's projected share of world population consequently rises from 12 to 20 percent and Latin America's increases by a percentage point, from 8.4 to 9.5 percent.

A word of caution is needed about both

Box 2. World Population Projections

While the need for population projections is obvious, demographers face difficult decisions regarding the *assumptions* to be used in preparing them. Assumptions must be made about the future course of birth and death rates and, in some cases, about migration.

Many factors must be considered when projecting a country's population. What is the present level of the birth rate, of literacy, and of education? Does the government have a policy to influence population growth? What is the status of women?

Along with these must be weighed the likelihood of socioeconomic change, for it is generally assumed that, as a country "develops," a preference for smaller families will cause fertility to fall to the replacement level of about two children per woman. But when can this be expected to happen in less developed countries? And for the majority of more developed countries with fertility currently below replacement level, can one assume that fertility will rise to avert eventual disappearance of the population and, if so, when?

Predicting the pace of fertility decline is most important as illustrated by the United Nations long-range projections for Africa. As with many projections, these are issued in a "series" to show the effects of different assumptions. The U.N. "low" projection for Africa assumes that replacement level fertility is reached in 2030, which would put the continent's population at 1.4 billion in 2100. If attainment of replacement level fertility is delayed to 2065, as in the "high" variant, the population is projected to be 4.4 billion in 2100. That difference of 3 billion should serve as a warning that using population projections requires caution and consideration of *all* the possibilities.

The table below summarizes the variation in the most recent U.N. long-range projections for world population according to the year when replacement level fertility is assumed to be reached.

United Nations World Population Projections: 1980-2100

Series	1980 population (millions)	Replacement level fertility[a] reached in	2100 population (millions)
High	4,441	2065	14,199
Medium	4,432	2035	10,185
Low	4,420	2010	7,524

Source: 1980 long-range projections of the United Nations, Population Division

[a] Replacement level fertility = Total fertility rate of 2.1 births per woman.

the magnitudes and regional distribution of population in projections to 2025. Because of its currently high birth rates and declining death rates, Africa has the *demographic* potential to grow as projected, rivaling the growth of Asia and Latin America over the last three decades. But there is no guarantee that Africa has the political, social, and economic base to support such increases. Birth rates are still stubbornly high—up to 50 per 1,000 population and more—and total fertility rates range from 6 to 8 births per woman in most countries. But a potential response to population pressures could be fertility declines much faster than those seen in other regions (except in China, where the drop in the fertility rate from 5.8 to 2.1 births per woman in just 14 years from 1970 to 1984 was largely due to strong government measures unlikely to be feasible in African countries. See description of China, page 41).

In the increase projected for Latin America, we see a reflection of the population momentum described earlier as well as some of its implications. Birth rates are falling rapidly in some Latin American countries, but because of their large population bases, numbers of births are not declining in equal proportion. The resulting population increases are projected on the population of Latin America today, but many of these people may not be living in Latin America. With the large numbers involved and the pressures they are likely to exert on debt-ridden Latin American economies, it is likely that some of the increase will spill over into North America, continuing the migration flows that have been accelerating since the early 1970s. International migration within and out of Africa and Asia could also change the regional and subregional distribution projected for these populations in 2025.

The path to stabilization: 2025 and beyond

Population projections for the world, regions, or countries beyond 2025 are highly speculative. The mechanics are the same as for the shorter range, but assumptions about the components of population change that drive these projections require extrapolations from current trends and judgments about the shape of those trends over the next 40-100 years.

Current trends suggest that most countries of the world will complete, or nearly complete, the transition to low fertility and mortality by 2025. Fertility is already at or below replacement level in virtually all industrialized countries and in the demographically key LDC, China. Fertility is also low in other East Asian countries—Korea, Taiwan, Japan (an industrialized nation)—declining rapidly in much of Latin America, and coming down in India, the world's second most populous country at 785 million in 1986 (see description of India, page 42). Still uncertain is when and how fast the decline will be in other populous South Asian nations, such as Bangladesh and Pakistan, in North Africa, particularly Egypt with a fertility rate well over 5 births per woman and some 51 million people in 1986, and in sub-Saharan Africa, especially the largest country there, Nigeria (see description of Nigeria, page 44).

On the basis of these trends, projections beyond 2025 show world population growth slowing and global numbers stabilizing by the last decade of the 21st century, according to U.N. medium projections. However, these projections assume that fertility will level off in all countries by at least 2040 at more or less the replacement level of two births per woman. But fertility may stay higher than that in some LDCs and never again rise to replacement in the many industrialized countries where it is now much lower, as in the U.S., which has had a fertility rate of about 1.8 births per woman since the mid-1970s.

Long-range projections also do not allow for risks like nuclear war and other catastrophes. Wholesale mortality was common in the past, as with the Black Plague that killed a quarter to a third of Europe's population in the 14th century. At today's growth rates of very large populations, losses of thousands or hundreds of thousands of lives in earthquakes and typhoons are made up in a few hours or days, and even the millions of deaths during World War II did not stall the population surge since then. Nevertheless, much higher than projected mortality from risks seen and unseen in the mid-1980s is possible.

In the most recent long-range U.N. medium projections (1980), world population grows from the 8.2 billion in 2025 to about 10.2 billion before stabilizing around 2095. As in the projections for 1985-2025, Asia adds the largest numbers of the five regions shown in Figure 1 and Table 1, increasing from 4.4 billion in 2025 to 4.9 billion in 2100. Long-range projections for individual countries made by the World Bank show China stabilizing at 1.6 billion, even assuming fertility already at replacement level in the 1980s. India, with currently more than twice that fertility, about 4.5 births per woman, outstrips China and all other countries with 1.7 billion when stabilization is reached, according to the World Bank projections.[7]

Africa's projected relative growth is again greatest among regions, with an increase of 974 million over its 1.6 billion in 2025 to 2.6 billion in 2100. Some increases projected by the World Bank for African nations are staggering. Nigeria's 100 million population of 1985 is projected to more than triple to 329 million in the 40 years to 2025 and be up to 532 million at stabilization. For Kenya, with a current fertility rate of 8 births per woman, the projection is from 20.6 million in 1985 to 5.8 times that number, 120 million, when stabilization occurs.

Increases projected by the U.N. for other regions with low growth rates or rates declining faster than Asia's or Africa's seem much more modest but are still substantial. Between 2025 and 2100, Latin America will add 459 million to its 2025 population of 779 million and North America (Canada and the U.S.) will add 37 million. These increases reflect only momentum in natural increase and do not incorporate potential large international migration flows. For Europe, the U.S.S.R., Japan, and Oceania combined, the U.N. projects a *decline* of 7 million in this period.

Such enormous future additions to LDC populations may seem impossible, particularly in the poorest countries, given the difficulty that their present economic, social, and political systems have in supporting even current population numbers at decent standards of living. It is tempting to say that the projections are simply too high; that something will happen to slow population growth long before such large increases can occur. Indeed, as noted, fertility is falling in some areas faster than anyone anticipated a decade or two ago.

But even in these areas, population is still increasing and substantial numbers will be added before growth ceases. One of the main lessons from recent demographic history is that the timing of the onset of fertility decline and the pace of that decline once it starts are crucial in determining how population will grow along the path to stabilization. If large numbers accumulate, even low rates will generate large absolute growth along this path. Asia demonstrates this. It is also what makes future prospects for Africa so uncertain. Africa's estimated 583 million population as of mid-1986 is small compared to Asia's some 2.9 billion. But this will not last long at Africa's current overall growth rate of 2.8 percent a year—compared to 1.8 percent in Asia—and higher in many African countries. If such high rates persist for a decade or two, Africa will accumulate a population base capable of generating the large additional numbers that the United Nations projects for the end of the next century, even at the lower growth rates assumed for the early part of that century. That picture will change only if fertility rates decline much faster during the next 10-15 years than suggested in current projections.

The outlook

To complete this overview of world population trends and prospects, it is useful to summarize the two periods of major population expansion since 1750. The first lasted about 200 years and was triggered by rises in population growth rates in Europe beginning during the Industrial Revolution in the late 1700s. It spread overseas to countries of European settlement in the 1800s. World population increased from about 760 million in 1750 to 2.5 billion in 1950, multiplying 3.3 times. Not all this growth occurred in Europe or areas of European settlement. Asia actually added the most numbers of any region because its growth rate, though lower than that of Europe during this period, applied to a much larger initial population base.

The second population surge began after World War II and is concentrated in the developing countries. Their growth rates increased because improved living standards and the introduction of medical technology reduced death rates while birth rates stayed high. Although population growth rates are now slowing in developing regions (except in Africa and a few other areas), the second major population expansion is still going on. Growth rates in industrialized countries are now very low, with fertility in virtually all these countries at or below the replacement level threshold of about two births per woman. Most developing countries still have a way to go before reaching that threshold, though most, except in Africa, are expected to be close to it by 2025. In that year, world population is projected to be 8.2 billion, about 3.3 times the 1950 total. That multiple will have been reached in 75 years, com-

Mothers and children in Francistown, Botswana. Africa's population is projected to grow from 555 million in 1985 to 2.6 billion in 2100.

pared to 200 years in the first major post-1750 population expansion. More than 90 percent of this increase will have been in developing countries, though international migration could affect the actual residential distribution of the increase in population, as it did during the earlier expansion generated in Europe.

How the vast increases projected for developing countries will be accommodated and how they will affect efforts to improve living standards are matters of concern for all nations. For the developing countries, it is a question of whether they will evolve into a kind of permanent underclass at the bottom of a two-tiered world economy. For the more developed countries, now approaching population stabilization and dealing with issues arising from stabilization in advance of the developing countries, it may be difficult to continue as islands of prosperity in a sea of poverty in a world made smaller by modern transportation and communication, particularly if imbalances between population and resources in developing countries generate waves of immigration and other spillovers.

Population Growth and Living Standards

A surge in population does not occur in a vacuum, but as part of sweeping political, economic, and social changes. European population growth accompanied the Industrial Revolution. It was not just a case of more people, but of many more people enjoying living standards that rose along with population numbers. The recent LDC expansion began as political and/or economic colonies of Europe were achieving independence and mounting efforts to haul living standards up the long road to levels in industrialized nations. A key question is whether their rapid population growth retards development.

Theories about population and development

Thomas Malthus, writing at the end of the 18th century, was deeply concerned about the potential adverse effects of England's population expansion. As he looked back over history, much of the evidence he found pointed to periods of population decline after surges of growth. This led him to the pessimistic conclusion that there was a negative feedback between population growth and living standards. A rise in living standards might touch off population growth, mainly through earlier marriage, but diminishing returns to added labor in agriculture with fixed land would eventually lead to economic and demographic downturns.

History proved Malthus wrong, at least for the now-developed countries. The 19th century brought technological and institutional breakthroughs that enabled Europe to avoid the effects of diminishing returns. The newly invented steam engine used energy more efficiently; the factory system increased labor productivity. Trade supplied raw materials for expanding industries and food for urban workers. Growing populations provided labor for industry and markets for new products. Institutional changes that ac-

Table 2. 1980 Population, Gross Domestic Product (GDP), and GDP per Capita: Selected Less and More Developed Countries

Country group	1980 population (millions)	1980 GDP[a] (billions of U.S. dollars)	1980 GDP[a] per capita (U.S. dollars)
Developing countries			
Low-income	2,175	549	250
Middle-income oil importers	611	915	1,500
Middle-income oil exporters	494	654	1,320
Industrial market economies	715	7,463	10,440
Total	3,995	9,581	—

Source: World Bank, *World Development Report 1984* (New York: Oxford University Press, 1984) Table 2.1. Reproduced with permission.

[a] Gross domestic product (GDP) measures the total final output of goods and services produced by an economy.

companied industrialization contributed to the eventual decline of fertility, while emigration eased growing population pressures and helped expand Europe's trade networks. By the end of the 19th century, Malthus and his concerns had been all but forgotten.

The concerns emerged again in the 1950s. Underlying them was the fact that most of the world's income and wealth was in the industrialized countries and most of the population and potential for population growth was in the developing countries. This imbalance continues. Table 2, derived from the *1984 World Development Report* of the World Bank, shows population and gross domestic product (GDP) in 1980 for developing countries classified as low-income and middle-income oil importers or middle-income oil exporters and for "industrial market economies." The contrast between low-income LDCs and industrial market economies is striking. The latter account for only 18 percent of the population covered in the table but 78 percent of the GDP. Low-income LDCs represent 54 percent of the population, but only 6 percent of GDP. The average GDP per capita of industrial countries in 1980, $10,440, was more than 41 times that of low-income LDCs, $250.

Per capita GDP (or income) needs to be interpreted with caution when used to assess differences in living standards. The measure misses the large amount of nonmonetized activity in LDCs and does not reflect important aspects of well-being like health and education. Nevertheless, the differences in per capita GDP in 1980 indicate the challenges involved in reducing the gap between rich and poor nations in the face of the latter's rapid population growth rates, which ranged up to more than 3 percent a year by the 1960s. Developing countries that had experienced little growth in per capita income while population growth rates were low had to accommodate faster growth in numbers just when they were trying to raise average living standards for the populations they already had.

Also of concern was the increasingly youthful age structure of LDC populations as death rates fell rapidly and birth rates remained high. When birth rates are in the 40s per 1,000 population, well over 40 percent of a population is under age 15 (as is true in Africa today). This means both a high potential for future population growth and a high ratio of dependent children to persons in the working ages, 15-64 (see Box 3). The slow economic growth of developing countries before the 1950s had been due to low levels of investment in physical capital (roads, factories, and the like) which could increase their productive capacity. Would not the high ratio of dependent children to producers in high-fertility populations inhibit efforts to increase savings and investment? To many, LDCs seemed trapped by rapid population growth and low levels of economic development.

These concerns were mapped out by U.S. population economists Ansley Coale and Edgar Hoover in their classic 1958 book, *Population Growth and Economic Development in Low-Income*

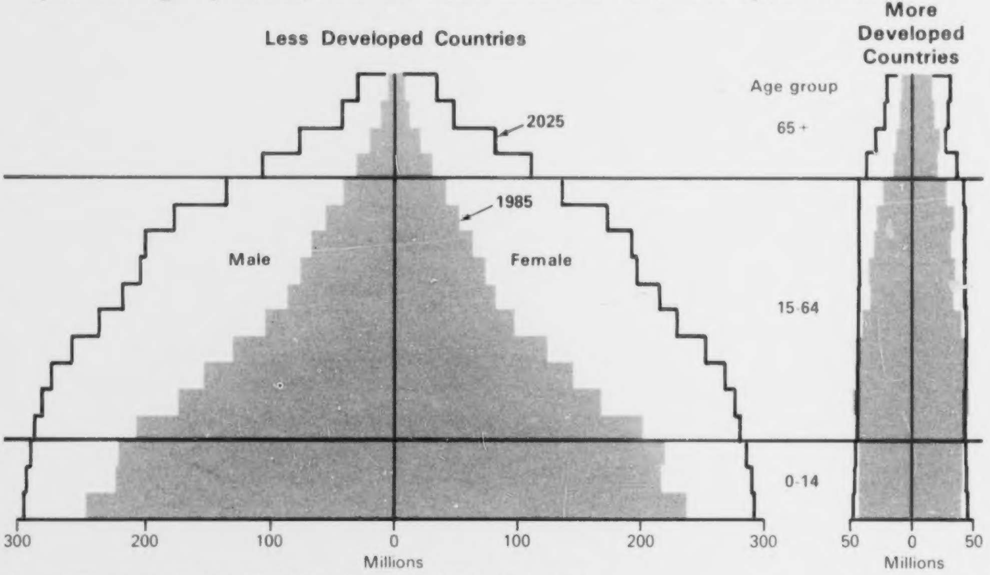
Box 3. Population Age Structure

A population's *age structure* is one of the first features demographers look at when assessing a country's demographic situation. It is the direct result of a country or area's recent demographic history and is closely tied to its social and economic change. Current age structure, which is perhaps the most important part of the story demographers have to tell, is determined by a population's past mortality, migration, and, particularly, fertility and, in turn, strongly influences future demographic patterns.

A glance at the pyramids below tells us much about the history and prospects of the more and less developed countries. Demographic change will be affected by the proportions of the young and old in the population. In the less developed countries as a whole in 1985, reflecting current high fertility, there were about 64 persons under age 15 per 100 persons in the "working ages" of 15-64; the ratio was about half that in the more developed countries. This large "child dependency" ratio can have important socioeconomic consequences for the way in which less developed countries meet the challenges of development.

And, no less significantly, the proportions of young children translate directly into the momentum of future population growth. The far wider base of the LDC population pyramid gives those countries much more potential for population growth. With 37 percent of their population below age 15 in 1985, in contrast to 22 percent in the more developed countries, LDC populations will continue to grow even when LDC couples average two children apiece. The two very different pyramids in 2025 illustrate this dramatically. In the LDCs by 2025, all age groups have become much larger, while the base of the pyramid for more developed countries has begun to constrict. In the more developed countries, the impetus for population growth provided by age structure has all but disappeared.

Population Age Pyramids, 1985 and 2025: Less and More Developed Countries



Source: 1982 assessments of the United Nations, Population Division, medium variant.

Countries.[8] Using computerized economic models and population projections, Coale and Hoover created alternative scenarios for India and Mexico to show how continued high fertility would inhibit growth of per capita income by lowering the amount of investment per worker. Their main policy message was that if developing countries were to improve living standards, interventions to reduce mortality needed to be balanced by efforts to reduce birth rates.

Neo-Malthusianism, as this view has been called, was the rationale for governments such as the U.S. to channel foreign aid funds to family planning programs in developing countries. Many U.S. legislators were concerned that economic aid efforts would otherwise be swamped by added population. Considerable effort went into informing LDC leadership groups about the adverse effects of rapid population growth to motivate them to support family planning in their countries. In 1984, the World Bank devoted its annual *World Development Report* to the population and development issue. It concluded that: "For the poorest countries, development may not be possible at all, unless slower population growth can be achieved soon."[9]

Not everyone has agreed with the neo-Malthusian view, and the question of how population growth affects development remains controversial. At the 1974 World Population Conference in Bucharest, many LDC delegations challenged the idea that family planning was necessary for development. Nationalistic and Marxian ideologies were reflected in assertions that institutional and structural obstacles rather than population growth cause underdevelopment. However, LDC leaders became much more supportive of family planning in the decade following Bucharest and some countries that had been vocal critics in Bucharest, most notably China, were leading supporters of family planning activities by the time of the next world population conference, which took place in Mexico City in 1984.

Much of the impetus for the Mexico meeting came from LDCs. Ironically, the U.S., whose advocacy of family planning had been challenged in 1974, was the country that went against the mainstream at the 1984 meeting. The U.S. delegation led a movement to exclude abortion from family planning programs and took a position of conservative skepticism regarding the adverse effects of population growth on economic development. It urged LDCs to seek free markets rather than expand government involvement in economic and population matters.[10]

The U.S. stance at the Mexico conference reflected election-year politics as well as growing criticism in the U.S. of the "limits-to-growth" approach to economic-demographic relationships. A number of economists were skeptical of models that produced dire results when projected rises in population were matched against fixed resources and a fixed absorptive capacity of the environment.[11] Following Coale and Hoover, the best known of these models were the original *Limits to Growth* report of the Club of Rome, published in 1972, and the 1980 *Global 2000 Report to the President of the United States.*[12] Limits-to-growth thinking was targeted for criticism by growth optimists such as economist Julian Simon and futurist Herman Kahn.

Simon and Kahn argued that limits models ignore the role of markets in generating adjustments which bring population, resources, and the environment back into balance.[13] They cited evidence that resource prices have fallen rather than risen over the long run and listed the resource-saving (or substituting) inventions that human ingenuity has fashioned in response to imbalances created by population growth. In their optimistic view, population growth is a stimulus, not a deterrent, to economic advance. If imbalances persist, it is because markets are not being allowed to generate the proper signals to innovators, investors, and entrepreneurs through the price system. Simon's widely publicized 1981 book, *The Ultimate Resource,* cast human ingenuity (the "ultimate resource") as the solution to population-resource problems.[14]

This political and academic criticism of neo-Malthusian views has stirred renewed interest in the question of whether and how rapid population growth affects the economic growth of less developed countries. In 1983 the National Research Council of the U.S. National Academy of Sciences commissioned a panel of experts to review scientific evidence on these issues. The panel's report, *Population Growth and Economic Development: Policy Questions*, published in March 1986, poses nine questions about the theoretical and empirical evidence on links between population and development:[15]

1. Will slower population growth increase the growth rate of per capita income through increasing per capita availability of exhaustible (nonrenewable) resources?
2. Will slower population growth increase the growth rate of per capita income through increasing per capita availability of renewable resources?
3. Will slower population growth alleviate pollution and the degradation of the natural environment?
4. Will slower population growth lead to more capital per worker, thereby increasing per worker output and consumption?
5. Do lower population densities lead to lower per capita incomes via a reduced stimulus to technological innovation and reduced exploitation of scale economies in production and infrastructure?
6. Will slower population growth increase per capita levels of schooling and health?
7. Will slower population growth decrease the degree of inequality in the distribution of income?
8. Will slower population growth facilitate the absorption of workers into the modern economic sector and alleviate problems of urban growth?
9. Can a couple's fertility behavior impose costs on society at large?

In looking for answers to these questions, it is important to note that there are two ways to address the relation between population growth and economic development. One is to ask whether rapid population growth presents an obstacle to development. An affirmative answer does not automatically mean that slower population growth alone would solve development problems, but rather implies that it would make it easier to take the steps needed to promote development. The other way is to ask whether slower population growth itself can speed development, for example, by increasing output per worker.

Both approaches appear in the literature on population and development. The National Research Council experts have posed the issue in the second way. There does not seem to be much difference between the two, since removal of an obstacle to development does contribute indirectly to development. But the second approach requires much stronger evidence to show that slower population growth will actually raise average levels of income, output, schooling, etc.

The panel's answers to their questions are "no" to No. .5 and "yes" to the other eight, but qualified. Summing up, they state:

> "On balance, we reach the *qualitative* conclusion that slower population growth would be beneficial to economic development for most of the developing world." But, they add: "a rigorous *quantitative* assessment of these benefits is context-dependent and difficult."[16] (Italics added.)

This is a more cautious and complex approach than has been typical of popular and policy-oriented discussion of the issue over the last two decades. It is not easy to keep it in focus in a political climate in which debate about funding for international population aid has become heated over such issues as abortion and allegations of coercion by government-sponsored family planning programs.

Population growth and income

Simple arithmetic shows that to maintain a given standard of living, or per capita income, economic growth must equal population growth, and that to *raise* living standards, economic growth must be higher than population growth. The core issue here for the population and development debate is whether and how rapid population growth affects the capacity of a country to raise output and hence per capita income.

Neo-Malthusian theory maintains that raising output is difficult in a rapidly growing population because the youthful age structure associated with high fertility produces such a high ratio of consumers dependent upon the country's producers. Since consumption and savings are cut from the same pie (annual national income), the argument goes, increased consumption shrinks the amount left over for savings from which investments flow to create a larger pie in the future. However, cross-country studies now suggest that age structure plays at most a secondary role in a country's rate of investment; institutions are more important. In developing countries, the public sector, reinvested profits, and foreign investment influence investment rates much more than personal savings. With the high proportion of poor households characteristic of so many LDCs, there are few households with anything left over for savings. For those in the monetized part of the economy, the "saving" has been done for them by employers who reinvest profits rather than distribute them through higher wages.

Another strand in the neo-Malthusian argument is that with a given rate of investment, a higher rate of population growth leads to a decline in the amount of capital per worker. The World Bank's *1984 World Development Report* calls this "capital widening" in contrast to "capital deepening" when investment per worker goes up. A crucial third variable here is technological change; capital widening will lead to lower productivity (diminishing returns) unless technological change can offset it.

The role of technology is one of the key points on which the population debate is divided. Critics of neo-Malthusianism argue that population growth stimulates technological progress. They cite Europe's experience during the Industrial Revolution and the improvements in agricultural productivity that followed increased demand for food generated by population growth. *Their* critics in turn are less optimistic about the potential of technology to offset capital widening in LDCs today. They point out that few of the technological advances now available to LDCs were developed by LDCs and that many modern technologies in fact exacerbate LDC problems because they are oriented primarily to labor-scarce industrial economics and generate relatively few new jobs. Another problem is that poorer LDCs do not have the financial resources to acquire technologies at world market prices unless they borrow and that some LDCs that have done so are now saddled with crippling debts.

There is little evidence showing that rapid population growth plays a *direct* role in stimulating or inhibiting the technological changes needed to offset capital widening. Again, institutional factors play an important intermediary role, so that the responsiveness of LDCs to their population pressures is conditioned by their specific circumstances.

Thus, it is not surprising that the correlation between population growth rates and per capita income over the past few decades has not been as strong as theoretical models suggest. A further reason for caution about these models is that neither physical output nor the physical capital that generates growth in output tell the whole development story. As noted earlier, measures of physical output such as per capita GDP do not indicate how healthy or educated a population is or who gets what share of the national income. Some LDCs have succeeded in maintaining high rates of economic growth, or output, even with high rates of population growth—for example, Brazil and Mexico until the early 1980s. But this has often been at a high social cost in unequal distribution of income and poor health and inadequate education for the majority of their people.

Education and health

For economic development, investments in human capital through improved health and higher educational attainment are as important, if not more important, than accumulation of physical capital. Healthier, better-educated workers perform better and so boost both a nation's output and their own family living standards. They are also more likely to respond to population pressures by opting for smaller families and adopting new agricultural methods.

Concern about effects of rapid population growth on investments in education and health focuses on both society and the individual family. Rapid increases in the number of children of school age could defeat national efforts to raise average levels of educational attainment or dilute the quality of education. At the family level, most of the research reviewed in the National Research Council report finds less investment in schooling per child in larger families which, to some extent, seems to reflect deliberate parental trade-offs between family size and per child expenditure.[17] These trade-offs accentuate other social and economic inequalities in LDCs, since lower-income groups tend to have less education and higher fertility than middle- and upper-income groups.

Most LDCs have managed to increase the proportion of children enrolled in school, particularly at the primary level, despite rapid population growth. But government expenditures on education have not gone up at the same pace; the number of pupils per teacher has increased and teachers' salaries have declined, so the quality of education may well have deteriorated.

Average life expectancy has gone up markedly in most LDCs over the past three decades, but this is not clearly linked with government expenditures on health services. Most LDCs have spent the large part of health budgets on hospital-based curative services in cities that are most accessible to middle- and upper-income groups, leaving the urban and rural poor with little health care.

At the family level, one of the most important links between population and health is that between child-spacing and maternal and child health. Data from the World Fertility Survey and Contraceptive Prevalence Surveys show that illness and deaths are more likely among children when births are closely spaced than when births are separated by at least two years.[18] There is also evidence that maternal health is adversely affected when births are closely spaced, so that family planning can improve the health of both mothers and children.

Most LDCs have managed to increase the proportion of children enrolled in school, but government spending on education has risen more slowly, so educational quality may have deteriorated.

Urbanization, employment, income distribution

Historically, urbanization has played an important role in economic development. Cities have been the centers of manufacturing and service industries that produce higher profits than farming, fishing, and the like, so they made it possible for economies to grow along with populations. But urbanization in LDCs has also had many negative aspects. Rapid city growth has generated congestion, deteriorating services, shanty towns, and employment problems and government economic and fiscal policies have often favored urban

Table 3. Proportion Urban and Urban Population Growth Rate: More Developed Countries, 1875-1900, and Less Developed Countries, 1950-1975

Region	Percent of total population in urban areas		Increase in period	
			Number (millions)	Annual rate (percent)
	1875	**1900**	**1875-1900**	
More developed countries	17.2	26.1	75	2.8
	1950	**1975**	**1950-1975**	
Less developed countries	17.3	27.1	520	4.1

Sources: More developed countries 1875-1900: United Nations, *Patterns of Urban and Rural Population Growth* (New York: 1980); Less developed countries 1950-1975: United Nations, *Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1982 Assessment* (New York: 1985). See reference No. 19.

dwellers at the expense of rural people and agricultural development.

In assessing the role of rapid population growth in urban problems, it is important to distinguish between urbanization (the proportion of national population living in urban areas) and urban growth (the rate of growth of urban populations). Urbanization increased during the economic and demographic expansions of both European populations during the 19th century and LDCs in this century. A comparison shows that the rise from 1950 to 1975 in the urban proportion of LDC populations, 17 to 27 percent, was similar to the rise from 1875 to 1900 in the now-developed countries, 17 to 26 percent. This suggests that development rather than population growth is the main determinant of urbanization.[19] But LDC city population grew by 4.1 percent a year between 1950 and 1975, far faster than the average 2.8 percent annual growth rate of city population in the now-developed countries from 1875 to 1900 (see Table 3). This is because city growth rates reflect national population growth rates, and national rates have been so much higher in LDCs than they ever were in the developed countries.

According to the United Nations, natural increase accounts for about 60 percent of the growth of LDC city populations, with "primate" cities, usually national capitals, growing more rapidly than smaller cities.[20] Rural-to-urban migration accounts for the remaining growth. Indirectly, natural increase also figures into the contribution of migration, since higher natural increase in rural areas is one of the factors in migration to cities. Other important factors are limited job opportunities and services in rural areas and the much better opportunities that potential migrants perceive to be waiting in urban areas. Improved transportation and communication have also fostered geographic mobility in LDCs.

The rapid growth of LDC cities presents many challenges, including pressures on services—education, health, water, sanitation, and transport—and, perhaps greatest of all, on employment.[21] Most LDCs have opted for a style of industrialization oriented to products requiring modern and labor-saving technologies in order to meet foreign competition for local as well as export markets. These industries have not created jobs as fast as job-seekers have arrived in cities. One consequence of this is increasing segmentation of urban labor markets, with higher pay but more limited access to jobs in the more organized segment of the market and lower earnings in the "informal" sector—personal and domestic services, crafts production, street vending, and the like.

The informal sector is an important way that LDC city dwellers cope with the employment problem. In fact, it is often the only means for survival in societies that cannot afford public welfare. But it is also a prime reason for the persistence in cities of the income inequality that has traditionally divided urban and rural areas. A growing concern of many observers is the prospect of a large and semi-permanent underclass of urban poor who have little hope of increasing their earnings and also lack access to basic services, because water, sanitation, and public transportation to reach schools, health facilities, and jobs are often not supplied to the unplanned shanty towns where up to half of LDC city residents live.

Links between population growth and income inequality are complex because so many variables are involved. It is tempting to resort to the maxim that "the poor have children" and let it go at that. In most countries, fertility rates are indeed higher among lower-income groups in both urban and rural areas. Family planning programs that offer easy access to otherwise unaffordable contraceptives can improve the welfare of the poor. However, as the National Research Council report notes, it is more difficult to illustrate conclusively that lower fertility would narrow income inequalities over the long run.[22]

Rapid population growth cannot alone be blamed for the problems of LDC cities which are fundamentally due to inadequate economic, social, and political structures and policies. But it aggravates the problems and a basic fact is that about 80 percent of total LDC population growth over the past three decades has been absorbed by cities and the proportion is likely to be higher in the coming decades. Further, even though population growth rates are declining in most LDCs, young adult populations are growing especially rapidly, because of past high fertility, and this will continue well into the next century. This puts extra pressure on city job markets and housing for new families. Slower urban growth will ease the problems eventually. But the slower city growth that is projected for early in the next century depends very much on how rapid the projected continuing decline in LDC national population growth rates will be.

A market in Ecuador. The informal sector is an important way that LDC city dwellers cope with the employment problem.

Population, resources, and the environment

The impact of rapid population growth on resources and the environment concerns both developed and developing countries, but is specially important in the prospects for economic development in LDCs. Limits-to-growth theorists argue that the escape from Malthusian diminishing returns was only temporary and that planet earth is faced ultimately with fixed supplies of resources. Further, the technological "fixes" invented to stave off humanity's arrival at these limits are creating major environmental problems: air and water pollution from intensified manufacturing and farming, loss of topsoil, depletion of groundwater reserves, etc. For now, the consumption patterns of high-income countries have more impact on resource supplies and the environment than the large numbers of people in low-income countries. But computer models go into tailspins when they incorporate the prospect of even larger numbers in LDCs striving to emulate these consumption patterns in the future. The limits debate involves the issue of equity between generations as well as between rich and poor nations; conservation to ensure the availability of resources and a healthy environment for future generations requires reduced consumption by present generations. Low-income populations are averse to the idea of limiting their already limited consumption for the benefit of future generations of better-off individuals.

Important in looking at the impact of population growth on resource supplies is the difference between nonrenewable resources—fossil fuels and minerals—and renewable resources, such as water, farmland, forests, and fisheries. Since the earth's supply of nonrenewable resources is fixed, the human race has to find alternatives sooner or later. Population growth affects how soon these resources will run out but not the fact that they ultimately will.

Market forces play an important role in regulating the conservation and depletion of nonrenewable resources as well as stimulating development of substitutes for minerals and fossil fuel energy (oil, natural gas, and coal). With new and better mining methods and more recycling, the prices of many minerals have actually fallen in real terms over the past half century and more. Slowing population growth can "buy time" for the development of such technologies. The National Research Council report finds that most evidence on the links between population growth and depletion of nonrenewable resources shows that consumption patterns and production techniques are more important than population growth, at least on a global scale. This is scant consolation for low-income countries who are already short of resources and must buy oil and minerals at world market prices and are also under pressure from their rapid population growth. For them, the chance to buy time to accommodate increased numbers can be crucial for the welfare of future generations.

Renewable resources, on the other hand, can be reused indefinitely as inputs to production so long as they are not exploited past the point of regeneration. As the basis for food production, agricultural land, forests, and fisheries are especially important renewable resources for LDCs with rapidly growing populations. Population growth can affect the use and regeneration of these resources in two ways. One is the issue that concerned Malthus, diminishing returns. With a fixed stock of resources like arable land, added labor yields smaller and smaller increases in output per worker until the point when adding more workers becomes counterproductive and total output actually declines. Added workers and demands generated by population growth can also lead to overgrazing of rangelands, for example, and overharvesting of fisheries and forests that reduce or totally destroy the capacity of these resources to regenerate.

Malthus' predictions of declining labor productivity in food production did not materialize because of increased use of fertilizers and irrigation, development of new seed varieties, and other improvements in farming techniques as well as expansion of the amount of arable land under cultivation. Before 1950 most increases in world agricultural production stemmed from expansion of cultivated land. Since then, application of technology to increase yields per unit of cultivated land has played the larger role. Japan is a classic example of a country that overcame diminishing returns on its very limited arable land through intensive cultivation methods. The NRC report notes that Latin America and parts of Africa still have arable land that could be cultivated but also cites examples of diminishing returns in crowded Bangladesh and in sub-Saharan Africa. The latter has often gone hand in hand with soil degradation and deforestation, for which there is evidence of a link with climatic changes, especially reduced rainfall.[23]

Current global estimates of recent and projected food production are much more optimistic than those made during the world energy crisis in the mid-1970s. According to the United Nations Food and Agriculture Organization (FAO), world agricultural output rose 25 percent between 1971 and 1982, with production in LDCs rising 33 percent, compared to 18

Table 4. Population-Supporting Capacity in 2000 of 117 Less Developed Countries with All Cultivable Land Used for Food Crops, by Region

Level of farming	Number of countries in region					
	Africa	Southwest Asia (Middle East)	South America	Central America	Southeast Asia	Total
Total countries	51	16	13	21	16	117
	Unable to feed 2000 population on a sustained basis with:					
Subsistence-level farming	29	15	—	14	6	64
Intermediate-level farming	12	15	—	7	2	36
High-level farming	4	12	—	2	1	19

Source: G. M. Higgins et al., *Potential Population-Supporting Capacities of Lands in the Developing World*, Technical Report of Land Resources for Populations of the Future Project, by United Nations Food and Agriculture Organization (FAO), with the International Institute for Applied Systems and Analysis and United Nations Fund for Population Activities (Rome: FAO, 1982) p. 49.

Subsistence-level farming = No fertilizers or chemicals; traditional seed varieties and cropping patterns; no conservation measures.
Intermediate-level farming = Basic fertilizers and chemicals; some improved seed varieties; simple conservation measures; most productive crop mix on half of land.
High-level farming = Full mechanization; optimum use of fertilizers, chemicals, seed varieties, and conservation measures; ideal mix of crops on all land.

percent in developed countries.[24] Per capita food production went up 16 percent in South America and 10 percent in Asia during that time. Sub-Saharan Africa, where per capita food production has fallen since 1970, is the exception to this trend, although there, too, successful field trials of new grain varieties and better pest-control and farming methods are hopeful signs of change.

The main constraints on future world food production are likely to be political, managerial, and financial rather than technical. Bad management and misallocation of resources are cited, along with drought, as the main causes of famine in Africa, exacerbated by the region's rapid population growth. Technologies to increase food output exist, although they must be monitored to avoid degradation of soil and the environment. Also, the poorest LDCs with the greatest food needs may not have the financial resources and management skills to put more productive agricultural technology to work. The FAO recently weighed the food production potential of 117 LDCs against projected population in 2000, at different levels of technology and assuming that all cultivable land is used for food crops. The results, shown in Table 4, indicate that with only traditional subsistence farming methods, 64 of the 117 countries would be unable to feed their projected populations in 2000; 36 would still not be self-sufficient in food at intermediate levels of farming (some use of fertilizers, chemicals, improved seed varieties, and simple conservation measures); but the total drops to just 19 if the most advanced farming technologies are used (roughly those used in the U.S.). Those countries that cannot feed their own populations must somehow generate enough foreign exchange outside of agriculture to be able to pay for food imports, or face continuing reliance on food aid.

Conservation or depletion of renewable resources is affected by institutional arrangements—whether the resources are privately owned or open to all, and whether or not properly managed. Land, for example, will regenerate itself from season to season if ownership can be established and utilization controlled. This assumes, of course, that conservation measures are practiced; individual owners may adopt practices that lead to soil erosion and degradation if their main interest is short-term gain rather than preservation of resources over the long run.

With resources open to all—fishing grounds, forests, and agricultural land held in common—the door is open for individual users to exploit the resources for private short-term gain at a pace that could eventually destroy the resource as users multiply and if all do the same. In much of sub-Saharan Africa, land is abundant relative to labor, but common-use systems along with growing populations have accelerated the degradation of soil, grazing lands, and forests. The common-property problem also arises with pollution of the environment, threatening resources like air and water, and with the preservation of genetic diversity among animals and plants. Efforts to develop and diffuse high-yielding seed varieties bring major short-term gains, but this can lead to genetic uniformity of crops and bring on disaster if disease strikes a variety of crop that farmers grow exclusively.

Even though it is in everyone's interest to preserve common-property resources, growing numbers of users coupled with individual efforts to get the maxim return can lead to their eventual destruction. This potential "tragedy of the commons" was first pointed out by ecologist Garrett Hardin in a famous 1968 essay, using a parable about herdsmen, their cattle, and their eventual destruction of a common pasture and the cattle's deaths to argue that humans must abandon the "freedom to breed."[25] The only way to avoid the tragedy with a common-property resource is to establish property rights or, if that is not possible, to set up agreements or laws to regulate use of the resource. Institutionalization of a system for proper management of a common resource may be difficult, however, when this is seen as favoring one group over another. For example, many Brazilians regard exploitation of their Amazonian rainforests as a way of catching up to wealthier nations and resent outsiders who insist that the forests must be preserved because of their importance to the world's climate and stock of species.

Problems associated with the preservation of common resources are part of a larger set of issues that economists call "externalities." Externalities arise when the costs or benefits of one individual's actions fall on other individuals or on society as a whole. When costs or benefits are shifted from individual to individual, there is a redistribution of wealth or welfare. When the shift is from individual to society, the net result in the case of common resources can be destruction of the resource if individual actions are left unregulated.

Childbearing also involves externalities, costs that parents do not have to pay. These include public services—education, health programs—and the costs of increased numbers in a population—congestion and the like, and potential declines in wages when labor forces grow too large. These costs can be "internalized" with incentives or disincentives that bring individual couples' childbearing actions more in line with the costs to society. But this goes beyond economics to the value systems of society. Societies and individuals differ widely in the perceived and actual value of children, and what might be acceptable in one society—required fees for all schooling, no tax breaks for third and later children—might not be in another. Where fertility is considered too high, a minimum incentive on which virtually all would agree is provision of subsidized family planning services that would allow couples to have no more children than they want. Giving couples this control benefits both individual families and societies.

Population and Economic Development: A New Consensus?

The reexamination of relations between population growth and economic development should leave us a good deal more cautious about broad generalizations that blame rapid population growth for all development problems. To the extent that neo-Malthusianism has exaggerated the direct link between population growth and development, criticism is justified. But there is need for a balance in this criticism: rapid population growth is not the root cause of underdevelopment, but it cannot be ignored in dealing with the complex problems facing developing countries.

Probably the most important lesson learned from continued study of the relationships between population and development is the key role of institutions in mediating these relationships. Common to many developing countries, though they vary in severity, are institutional obstacles to development like unequal distribution of wealth and political power, poor management and organization, and waste of resources on military activities. Rapid population growth exacerbates many of the resulting problems but slowing population growth will not remedy the situation without positive steps toward change. Some commentators have characterized rapid population growth as the "accomplice" rather than the "villain" in this story.[26] They also note that the story has many variants, depending on economic and political situations in different LDCs.

The optimism of those who criticize limits-to-growth thinking is based on the assumption that institutional barriers will fall away so market forces can have full play. But this is questionable in light of economic and political realities in both developing and developed countries. Getting the right set of relative prices needed to generate technical and social responses that will conserve resources and preserve the environment as population grows depends on the distribution of economic and political power within and between countries. That arriving at the right prices on a worldwide basis will not be easy is suggested by evidence of interest groups in more developed countries like the U.S. who manipulate markets for purposes far removed from safeguarding of resources and the environment.

For developing countries, the issue is complicated by their limited share in the world's wealth compared to their share of the population. Poor and debt-burdened LDCs may not be able or willing to pay the prices that are right in market terms in order to balance resources and environmental preservation with population. When governments control resource and environmental decisions, leaders concerned with political self-preservation may be tempted to set food and resource prices artificially low in order to placate their growing populations. Individuals, too, mired in the poverty typical of so much of the developing world, are more interested in self-survival than preservation of common resources, particularly if that preservation is seen as maintaining the consumption patterns of individuals with higher incomes. And in both developing and developed countries, some common resources like air and water are difficult to control through market forces.

In sum, it is a lot harder to tell the development story more accurately as the complex interplay of population and institutional factors than it is to construct computerized economic-demographic models. It is also more difficult to establish rigorous scientific proof of the adverse effects of rapid population growth when development is understood in this way, because the story is still unfolding. This leaves policymakers with a dilemma. If they wait for sure proof of the adverse effects of rapid population growth, it may be too late to stop such effects from playing themselves out.

While the "doomsday" predictions of a decade or so ago now seem simplistic and exaggerated, not even population growth optimists envisage a world in which population can increase indefinitely. The real issue is whether there should be interventions to bring down high population growth rates in LDCs where such rates appear to be contributing to underdevelopment. More and more LDC leaders view these interventions as a matter of good judgment and common sense, even if not yet fully warranted on quantitative scientific grounds. Developed countries have basically relied on the same sort of judgment in providing population assistance over the past two decades. With the new population debate, they have learned to be more careful in explaining their rationale for this aid, particularly to political and media audiences who are prone to overstatement.

Fertility Decline in LDCs

Because they generally occur at a glacially slow pace, demographic changes rarely make the headlines. Yet the decline of a third or more in the fertility rates of many LDCs between the early 1960s and the early 1980s is headline news. According to the broad estimates shown in Table 5, total fertility rates have fallen substantially for several Asian countries and for many in Latin America, with China's drop from a total fertility rate of 5.8 births per woman in 1970 to 2.1 in 1984 being the most dramatic and demographically most important because of China's first-place population size. Even second-place India has experienced some decline, from an estimated 5.8 in the early 1960s to 4.5 in the early 1980s. However, fertility rates are still well over 6 births per woman in almost all countries of Africa, and in Afghanistan, Bangladesh, Nepal and some other smaller South Asian countries, and not much lower in Guatemala and other countries of Central America.

Table 5. Fertility Change in Less Developed Countries, Early 1960s to Early 1980s: Selected Regions and Countries

Region or country	Total fertility rate		Percent change
	Early 1960s[a]	Early 1980s	
East Asia	5.3	2.3[b]	−56.6
China	5.9	2.1[b]	−64.4
South Asia	6.1	4.6[a]	−24.6
Afghanistan	7.0	6.5[b]	−7.1
Bangladesh	6.7	6.2[b]	−7.5
India	5.8	4.5[b]	−22.4
Nepal	5.9	6.3[b]	+6.8
Thailand	6.4	3.5[b]	−45.3
Africa	6.7	6.4[a]	−4.5
Egypt	7.1	5.3[b]	−25.4
Kenya	8.2	8.0[b]	−2.4
Nigeria	6.9	6.3[b]	−8.7
Latin America	5.9	4.1[a]	−30.5
Brazil	6.2	4.1[b]	−34.4
Guatemala	6.8	5.8[b]	−14.7
Mexico	6.7	4.4[b]	−34.3

Total fertility rate = Average number of lifetime births per woman at current age-specific fertility rates.

[a] Source: United Nations, Population Division, *Demographic Indicators by Countries as Assessed in 1984*, medium variant, New York, December 1985, computer printout, for 1960-65 ("early 1960s") or 1980-85 ("early 1980s").
[b] Source: Population Reference Bureau, *1986 World Population Data Sheet* (Washington, D.C.: 1986).

In response to concerns about the adverse effects of rapid population growth on development, international assistance to LDC family planning programs increased substantially during the late 1960s and 1970s. Prior to the mid-1960s, most population aid came from private foundations. After 1965 official U.S. aid grew, and the U.S. was the major donor by the mid-1970s.

An important assumption of the aid effort was that interventions to reduce fertility would be as effective as those made to reduce mortality. Many were skeptical, however, that LDC families would be as willing to limit births as they were to avoid premature death, with the prevailing view that large numbers of children are necessary for labor in family enterprises, parental security in old age, and as a hedge against child mortality. Other observers, noting that fertility fell in Europe without benefit of organized family planning programs, argued that funds might be better spent on development goals like education and health programs to reduce child mortality that would enhance the motivation for smaller families. This view was summed up in the slogan of some LDCs reacting against population aid donors at the 1974 Bucharest population conference: "Development is the best contraceptive."

Donor agencies responded to this challenge by funding major research efforts to increase understanding of reproductive behavior in LDCs and to measure the impact of family planning programs. The World Fertility Survey, conducted from 1974 to 1984 in 42 LDCs, and a series of country studies sponsored by the U.S. National Academy of Sciences were important in this effort.[27] The agencies also sought to identify how family planning and other development efforts complement each other and to incorporate these influences in the programs they supported.

The World Fertility Survey was designed according to the intermediate variables framework developed two decades earlier by demographers Kingsley Davis and Judith Blake.[28] This framework shows how social and economic variables—education, employment, religion, etc.—affect fertility through their effect on intermediate variables related to the physiology of reproduction—intercourse, conception, and pregnancy outcome (miscarriage, abortion, or a live birth).[29] Population Council researcher John Bongaarts refined the intermediate variables into four "proximate determinants" of fertility: marriage, temporary infecundity associated with breastfeeding after childbirth, contraception (including sterilization), and abortion.[30] He devised methodology to measure the contribution of each to fertility decline or to differences between the actual total fertility rate of a population and the theoretical "natural" fertility rate of 17 births per woman.

Marriage differentials

The earlier women marry and the higher the proportion of women who ever marry, the greater the "exposure" of a population to the risk of childbearing, assuming that most births occur to married women or women in unions comparable to marriage. Earlier and much more universal marriage explains why birth rates in LDCs before recent declines were much higher than they were in Europe at the start of the fertility transition there. By the 1970s, marriage patterns varied widely in LDCs, according to World Fertility Survey findings. The proportion of women aged 15-19 who were married or living in consensual unions was close to 50 percent in South Asia and sub-Saharan Africa, about a quarter in the Middle East and North Africa, less than 20 percent in Latin America and East Asia, and only 5 percent in Korea and Hong Kong. The average age at marriage varied from 16 in Bangladesh to 25 in Sri Lanka, which largely explains the 2.3-child difference in these countries' total fertility rates around 1975: 6.0 births per woman in Bangladesh and 3.7 in Sri Lanka.

Parentally arranged child marriages, still common in parts of South Asia, contribute to higher fertility. Increased education and job opportunities help increase age at marriage and reduce fertility. Efforts to raise age at marriage by legislation have not been particularly successful. China attempted to raise the marriage age by edict in the 1960s and 1970s but later relaxed the policy in response to social pressures.

In Korea, higher age at marriage accounted for about as much of the drop in the fertility rate from 6.1 to 4.0 births per woman between 1960 and 1970 as did increased use of contraception (see Figure 3). The contribution of higher age at marriage to recent fertility declines has been less, though still significant, in India and Indonesia, but much less in Thailand, as in Latin America, where average age at marriage was higher to begin with.

Breastfeeding

Breastfeeding lengthens a woman's period of natural infertility after a birth and thus can increase the interval before the next pregnancy and reduce completed family size, even if no contraception is used. In Bangladesh, Pakistan, Nepal, and most of sub-Saharan Africa, where very few women use contraception, prolonged breastfeeding has kept fertility rates from being even higher than they are. In Latin America, however, breastfeeding declined as urbanization increased in the 1960s and 1970s and without offsetting increases in contraceptive use, fertility would have risen rather than fallen.

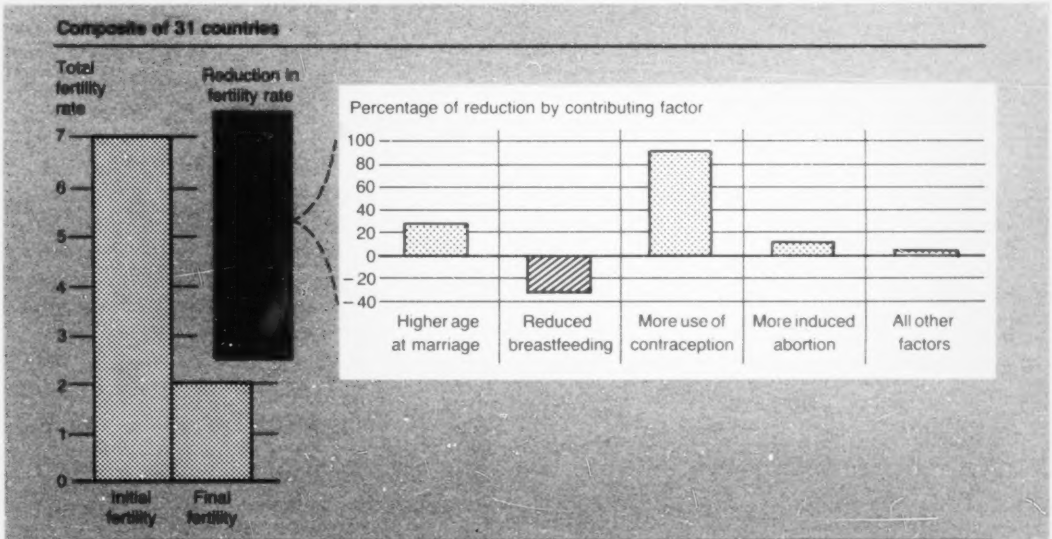
Abortion

Induced abortion has lowered fertility in LDCs but by how much is hard to say, since even in the many countries where abortion is legal to varying degrees, women are reluctant to admit in surveys that they have had an abortion. In Cuba and Korea, where it has been measured, abortion has contributed to fertility decline.

Rising contraceptive use

As shown in Figure 3, increased contraceptive use has been by far the most important of the four "proximate determinants" in recent reductions in LDC fertility rates, accounting for some 90 percent of the average decline in 31 countries. (Note that the sum of the effects of proximate determinants on the fertility decline comes to more than 100 percent because of the need to offset the negative effect of reduced breastfeeding.) During the 1970s, the proportion of women of reproductive age using contraception increased dramatically in East Asia, from 15-25 percent to 55-60 percent in Korea and Thailand, for example, and also went up markedly in several Latin American countries, including Brazil, Colombia, and Mexico. Where contraceptive prevalence remained very low—Bangladesh, Nepal, Pakistan, for

Figure 3. Contribution of Proximate Determinants to Fertility Decline: Selected Less Developed Countries



Selected countries and years

Country and period	Initial fertility rate	Final fertility rate	Percentage of reduction by contributing factor: Higher age at marriage	Reduced breast-feeding	More use of contra-ception	More induced abortion	All other factors
India (1972–78)	5.6	5.2	41	−58	114	—	3
Indonesia (1970–80)	5.5	4.6	41	−77	134	—	2
Korea (1960–70)	6.1	4.0	50	−38	53	30	4
Thailand (1968–78)	6.1	3.4	11	−17	86	16	4

Source: World Bank, *World Development Report 1984*, Figure 6.5. Reproduced with permission.

Table 6. Recent Contraceptive Prevalence Rates and Total Fertility Rates in 46 Less Developed Countries and 17 More Developed Countries

Region, country and year of survey	Percent of currently married women 15-44 using contraception	TFR[a] at time of survey
Less Developed Countries		
Sub-Saharan Africa		
Benin 1981–82	20	7.1
Botswana 1984	29	5.8
Cameroon 1978	3	6.4
Ghana 1979–80	10	6.5
Ivory Coast 1980–81	3	7.4
Kenya 1977–78	7	8.3
Lesotho 1977	5	5.8
Mauritania 1979	1	6.3
Nigeria 1981–82	5	6.3
Senegal 1978	4	7.2
Sudan (north) 1978–79	5	6.0
Zimbabwe 1984	38	6.5
Asia and Pacific		
Bangladesh 1979–80	13	6.2
Fiji 1974	42	4.2
Indonesia (Java Bali) 1976	28	4.7
Korea, South 1979	55	2.6
Malaysia (peninsular) 1974	35	4.7
Nepal 1981	7	5.9
Pakistan 1975	5	6.3
Philippines 1978	39	5.2
Sri Lanka 1982	57	3.7
Thailand 1981	59	3.9
Latin America		
Barbados 1980–81	47	2.4
Bolivia 1983	26	8.6
Colombia 1980	51	3.6
Costa Rica 1981	66	3.6
Dominican Republic 1983	47	4.1
Ecuador 1979	35	5.3
El Salvador 1978	34	6.3
Guatemala 1983	25	5.8
Guyana 1975	35	5.0
Haiti 1983	7	5.9
Honduras 1981	27	6.5
Jamaica 1983	52	3.5
Mexico 1979	40	4.6
Panama 1979–80	61	3.9
Paraguay 1979	39	5.0
Peru 1981	48	5.2
Trinidad and Tobago 1977	55	3.3
Venezuela 1977	49	4.5
Middle East and North Africa		
Egypt 1980	25	5.3
Jordan 1983	26	6.6
Morocco 1983–84	27	5.9
Syria 1978	20	7.5
Tunisia 1983	42	7.0
Yemen Arab Republic 1979	1	8.5

Source: Kathy A. London et al., "Fertility and Family Planning Surveys: An Update," *Population Reports*, Series M, No. 8 (Baltimore: Population Information Program, Johns Hopkins University, September-October 1985) Tables 4, 5, and 12.

Region, country and year of survey	Percent of currently married women under 45 using contraception	TFR[a] in 1982
More Developed Countries		
Europe		
Belgium (Flemish) 1975–76	85	1.6
Bulgaria 1976	76	2.1
Denmark 1975	63	1.5
Finland 1977	80	1.6
France 1977–78	71	1.8
Hungary 1977	74[b]	2.0
Italy 1979	78	1.6
Netherlands 1982	78[c]	1.4
Norway 1977–78	71	1.7
Poland 1977	75	2.3
Portugal 1979–80	70	2.3
Romania 1978	58	2.4
Spain 1977	51	2.2
Switzerland 1980	70	1.9
United Kingdom 1976	77	1.8
Yugoslavia 1976	55	2.0
United States 1982–83	68	1.8

[a] TFR = Total fertility rate = Average number of lifetime births per woman at current age-specific fertility rates.

[b] Data are for all women under age 40.

[c] Data are for women born 1945-64 and include cohabiting women.

example, and in sub-Saharan Africa—there was also no fertility decline.

Table 6, from a late 1985 report of the Population Information Program of Johns Hopkins University, shows the latest known contraceptive prevalence rates from World Fertility Surveys or Contraceptive Prevalence Surveys in 46 LDCs, along with the total fertility rate at the time of the survey, and contraceptive prevalence rates from similar recent surveys in 17 more developed countries, with the 1982 total fertility rates in these countries. The association between these rates is striking. Among the more developed countries, the proportion of married women using contraception is well over 60 percent except in Romania, Spain, and Yugoslavia, and the total fertility rate in 1982 was above the replacement level of 2.1 births per woman only in Poland, Portugal, Romania, and Spain, Among the less developed regions, contraceptive prevalence is highest in Latin America, ranging up to 66 percent in Costa Rica, in 1981, where the total fertility rate was then 3.6. In sub-Saharan Africa, contraceptive prevalence was as high as 38 percent in Zimbabwe, in 1984, though fertility was still estimated at 6.5 births per woman, but the proportion of married women using contraception was 10 percent or lower in almost all the sub-Saharan African countries surveyed, and the fertility rate was below 6 only in Botswana, in 1984, and in Lesotho, in 1977.

Explaining contraceptive prevalence

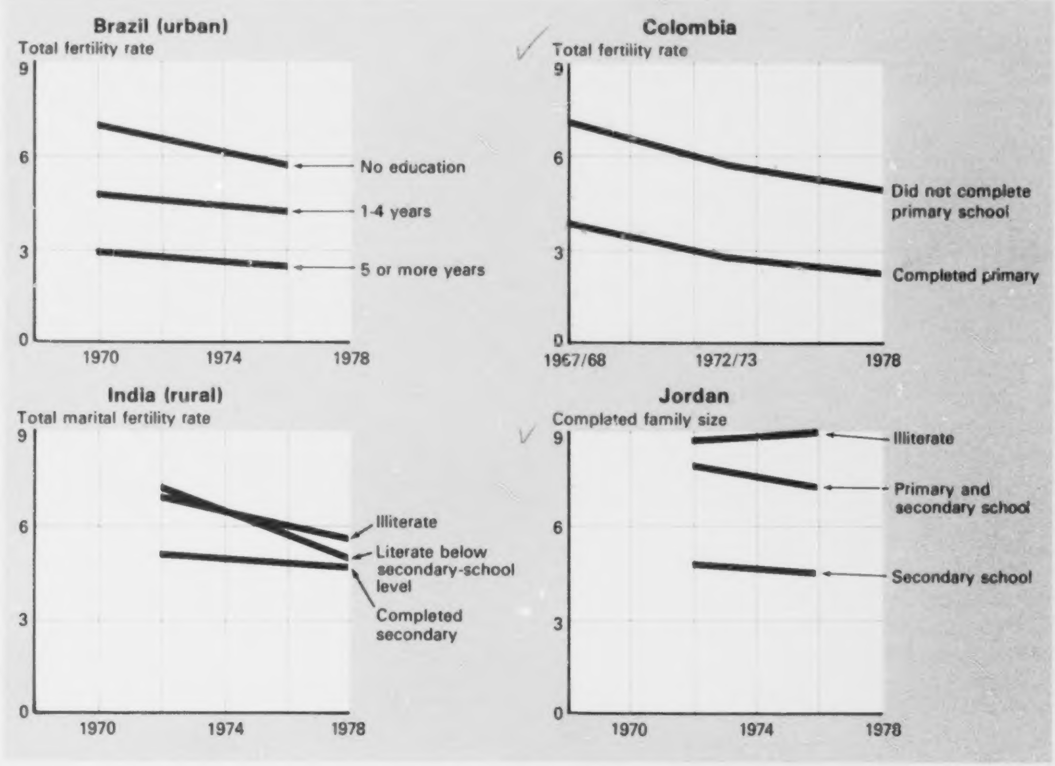
Easier access to contraceptives and increased motivation for smaller families explain most of the rise in contraceptive use in LDCs and, hence, fertility declines, where these have occurred.

Depending on the method they use, couples require some mix of information, medical assistance, and supplies in order to control fertility. Family planning services are supplied through private physicians, pharmacies and other commercial outlets, private or publicly organized family planning programs, and/or incorporation of family planning into existing health service programs. Increased spending on family planning by LDC governments themselves and foreign donors has increased the flow of contraceptive supplies and services to LDC populations, improved the effectiveness of delivery systems, and promoted research on more effective and culturally acceptable contraceptive methods.[31] By 1980 annual public spending on family planning activities in all LDCs amounted to some $2 billion, according to World Bank estimates.[32] LDC governments themselves accounted for practically all this spending in China and about 80 percent in India. In all other LDCs combined, foreign donors accounted for about half of the spending, with the amount varying from about 90 percent in countries with programs less than five years old to well under half in countries with programs at least ten years old. In the early 1980s, international population aid added up to about $500 million a year, or a quarter of public spending on family planning in LDCs. This was about 1.9 percent of the total foreign aid budget of Western European countries, Japan, Canada, and the U.S. The U.S. government and private American foundations currently provide about 40 percent of all foreign aid for population, but the U.S.'s contribution fell in real terms during the 1970s. The U.S. government appropriation for population aid in fiscal year 1986 (October 1, 1985, through September 30, 1986) was $239 million.

Use of contraception depends in turn on the motivation of couples to space or limit births, sometimes—as in sub-Saharan Africa today—mainly in order to improve the health of mothers and their children, but more often as a conscious effort to achieve social and economic aspirations associated with smaller families. Research now shows that the links between social and economic development and fertility control are complex and vary according to culture and other variables that are difficult to quantify. Even for Europe's fertility transition, simpler explanations of the decline as a consequence of urbanization and industrialization have given way to more complex models that take account of the fertility-decision process at the family level in different socioeconomic settings, the role of language and culture in the diffusion of the idea of fertility control, relationships between different generations in families and the sociocultural institutions that govern them, and the interplay between fertility and the two other demographic variables—mortality and migration.

Factors that change the traditional roles of women and improve their status are among the most important in explaining shifts to the small-family norm. Of these, increased education is consistently one of the most powerful variables explaining lower fertility and fertility

Figure 4. Fertility Decline, by Women's Education: Brazil, Colombia, India, Jordan



Source: World Bank, *World Development Report 1984*, Figure 6.6. Reproduced with permission.

declines, as seen in the data for Brazil, Colombia, India, and Jordan in Figure 4. Education can open the door to employment opportunities outside the home, change women's aspirations, and increase their chances of knowing how to control fertility and to take better care of children so that fewer births are needed to achieve a given family size. Economic theories of fertility decline add that education increases the value of women's time, leading to the substitution of other activities—including work outside the home—for the time-intensive one of raising children.

Education also plays a role in the changing balance of intergenerational costs and benefits that appears to accompany the shift to a small-family norm. Australian demographer John Caldwell points out that this shift occurs when parents begin to invest more in their children, mainly through increased schooling, than children contribute to the family through child labor, care for aged parents, and other traditional benefits of large families.[33] This reversal in the intergenerational "flow of wealth," which encourages couples to opt for smaller families, occurs in response to such changes as shifts from the extended family to the nuclear family as the basic economic unit, increasing urbanization and industrialization, and rising family incomes.

This helps explain why rising income is associated with smaller families rather than with larger families, which one might expect because most families want children and with higher incomes they could afford more. But once parents have more money to "invest" in children's education, for example, they tend to choose quality over quantity—fewer children but more spent on schooling per child, rather than spreading resources more thinly over many.

Child survival is another variable associated with rising income and reduced fertility. In low-income populations with high fertility and mortality, high proportions of children die before reaching adulthood. Parents who want children for family labor and security in old age often anticipate the loss of children by having more than would be needed if all survived. As living standards improve, more children do in fact survive. Increased fertility control both helps parents adjust their reproductive behavior to increased child survival and, conversely, as noted earlier, it increases the chances of child survival by making it possible to space births at least two years apart.

Widespread conscious action by couples to limit their fertility is a modern innovation. Preindustrial societies evidently know of ways that will actually control fertility (abstinence, withdrawal, abortion), but high average levels of fertility clearly indicate that practice is limited in such societies. Just how the idea and practice of fertility control spread through societies is a question that continues to fascinate social scientists. In Europe and European settlements overseas in the 19th century, this diffusion appeared to follow cultural and linguistic lines, suggesting that word-of-mouth was the main channel.[34] In LDCs today, mass media—radio, TV, film, print—have exploded and may be very important in accelerating the spread of the small-family norm and the knowledge that something can be done to achieve it. Communication is a major function of organized family planning programs, which makes it difficult to measure their impact on reproductive behavior solely in terms of numbers of contraceptives dispensed.

Indeed, recent research shows that similar and mutually reinforcing factors are associated with both increased motivation to practice fertility control and the success of organized efforts to increase access to the means of fertility control. Policymakers and planners would like to know the relative weight of each factor in boosting contraceptive prevalence in order to allocate scarce development aid and government program funds most effectively, but singling out these weights has proven to be difficult.

Family planning effort and socioeconomic development

Demographers Robert Lapham and Parker Mauldin have tackled this question, examining the association between contraceptive prevalence rates (at some point between 1977 and 1983), family planning "program effort" during 1972-82, and socioeconomic setting in 1970 for 73 LDCs (see Table 7). Their family planning "program effort" index covers such factors as political commitment, availability and quality of family planning services, method mix, outreach, use of mass media, local financial support, and record-keeping and evaluation. Socioeconomic variables are adult literacy, school enrollment rates, life expectancy, infant mortality rates, per capita gross national product, proportions of males working outside agriculture, and proportions of total population living in cities over 100,000. The study found that both family planning program effort and "socioeconomic setting" have a significant independent effect on levels of contraceptive prevalence but their *joint* effect is much greater than the effect of either set of variables alone. There were only a few exceptions to this general pattern. In Indonesia, with a contraceptive prevalence rate of 48 percent, a "moderate" program effort evidently compensated for a "lower-middle" socioeconomic setting, and high socioeconomic settings overcame very weak program effort in Peru (43 percent contraceptive prevalence rate) and Paraguay (36 percent).

These findings are good news for family planning program managers in those

Table 7. Contraceptive Prevalence Rates, by 1970 Socioeconomic Setting Index and 1972-82 Family Planning Program Effort: 73 Less Developed Countries

1970 socio-economic setting[a]	1972–82 family planning program effort[a]								
	Strong		Moderate		Weak		Very weak or none		
	Country	Rate[b] %	Country	Rate[b] %	Country	Rate[b] %	Country	Rate[b] %	Average %
High	Hong Kong	80	Cuba	79	Brazil	50	Peru	43	
	Singapore	71	Costa Rica	66	Venezuela	49	Paraguay	36	
	Taiwan	70	Panama	63	Mexico	40			
	South Korea	58	Jamaica	55					
	Mauritius	51	Trinidad Tobago	54					
			Colombia	51					
			Chile	43					
			Fiji	38					
	Average:	(66)		(56)		(46)		(39)	55
Upper middle	China	69	Thailand	58	Ecuador	40	Syria	20	
			Sri Lanka	57	Turkey	40	Ghana	10	
			Philippines	45	Honduras	27	Nicaragua	9	
			Dominican Republic	43	Egypt	24	Algeria	7	
			Malaysia	42	Iran	23	Zaire	3	
			El Salvador	34	Morocco	19	Zambia	1	
			Tunisia	31	Guatemala	18			
	Average:	(69)		(44)		(27)		(8)	29
Lower middle			Indonesia	48	Haiti	19	Bolivia	24	
			India	32	Kenya	7	Zimbabwe	14	
			Vietnam	21	Pakistan	6	Lesotho	6	
							Nigeria	6	
							Papua New Guinea	5	
							Burma	5	
							Senegal	4	
							Cameroon	2	
							Liberia	1	
							Uganda	1	
							Kampuchea	0	
	Average:			(34)		(11)		(6)	11
Low					Bangladesh	19	Benin	18	
					Nepal	7	Sudan	5	
							Sierra Leone	4	
							Ethiopia	2	
							Somalia	2	
							Yemen	1	
							Burundi	1	
							Chad	1	
							Guinea	1	
							Malawi	1	
							Mali	1	
							Niger	1	
							Tanzania	1	
							Burkina Faso	1	
							Mauritania	1	
	Average:					(13)		(3)	4

Source: Robert J. Lapham and W. Parker Mauldin, "Contraceptive Prevalence: The Influence of Organized Family Planning Programs," *Studies in Family Planning*, Vol. 16, No. 3 (May/June 1985) Table 6, p. 130.

[a] For description of socioeconomic setting and family planning program effort indexes, see text.

[b] Contraceptive prevalence rate = percentage of married women of reproductive age using contraception. Data are for some point between 1977 and 1983.

countries where the combined effect of program effort and socioeconomic progress has helped accelerate recent fertility declines. However, the findings are a cause for concern about countries where family plannning effort is weak or nonexistent and socioeconomic levels are also low. Seventeen of the 73 countries fell into this category, almost all in sub-Saharan Africa. In those countries, the proportion of married women of reproductive age using contraception averaged 3-13 percent, compared to 44 percent and higher in countries ranked in the top two categories of program effort and socioeconomic setting.

Another concern for program planners is the apparent stalling of fertility decline in some countries. Total fertility rates began rapid declines during the 1960s in Costa Rica, Korea, Sri Lanka, and Tunisia, but the declines slowed after 1975 with the rates still well above the replacement level of 2.1 births per woman.[35] (The latest data, for about 1984, show the rates at 3.5 in Costa Rica, 2.6 in Korea, 3.7 in Sri Lanka, and 4.9 in Tunisia.[36]) In both Costa Rica and Tunisia, initially strong family planning effort appears to have slackened and actual fertility per woman is now about the family size that couples say they want, on average. In Korea and Sri Lanka the reasons for the stall are less clear, but increases in age at marriage contributed to the early decline and now that influence appears to have run its course. The stalls are troubling, because these countries were early starters in the fertility decline of LDCs and their experience may foretell what lies in store for countries where the decline has begun more recently.

Path to Low Fertility

Nowadays when we think about fertility decline, we typically take as references a starting point at the high rates of 6-7 births per woman in LDCs where there is scant fertility control and a lower limit represented by the fertility of populations with high proportions of women of reproductive age using contraception—68 percent of married women in the U.S. in 1982, for example, and 55 percent of all women aged 15-44.[37] As a rule of thumb, demographers put that lower limit at a total fertility rate of "around two," the level at which a parent generation replaces itself with a generation of children of about the same size. In actual practice, few people know or care about this fine point of demographic science; if there is any appeal in the idea of a two-child family, it is probably the desire to have both a boy and a girl.

Fertility rates in many countries could quite possibly settle at levels above or below two births per woman, at least temporarily. The stalling of fertility declines in some LDCs suggests that declines from 6-7 to 3-4 births per woman may occur more rapidly than further declines to two births. Also, once the decline from 3-4 births starts, it may not stop at two. Total fertility rates are currently below replacement level in almost all developed countries and in at least five countries still ranked as LDCs: Barbados, Cuba, Hong Kong, and Singapore, as well as China. In Western Europe, the latest rates, for about 1983, are as low as 1.5 in Austria, Italy, the Netherlands and Switzerland, 1.4 in Denmark, and 1.3 in West Germany.[38]

While the momentum of past population growth is still great enough to maintain positive rates of natural increase in most countries with below-replacement fertility, natural decrease (fewer annual births than deaths) has already begun in Denmark, Hungary, and West Germany and will soon follow in other industrialized countries. Without a rise in fertility at least to replacement level or immigration to offset natural decrease, total population in these countries will gradually decline. Future *World Population Data Sheets* of the Population Reference Bureau may be showing "population halving time" rather than "doubling time" for these countries.

The world's total population is likely to stabilize eventually, but it is quite possible that some individual countries will continue to grow well into the future while others lose population indefinitely through natural decrease (see projections for West Gemany, page 46). This

Young couple in West Germany. Natural decrease has already begun in Denmark, Hungary, and West Germany and will soon follow in other industrialized countries with below-replacement fertility.

prospect raises important questions about international demographic interrelationships. With jet-age transportation, electronic communication, and increased flows of international trade and finance, economic and social interdependence of nations is greater than ever before and likely to increase in the future. Low-growth areas will not be able to isolate themselves from neighbors' population pressures.

Politically, the most sensitive area is migration, particularly for low-natural-increase areas close to high-growth areas: Europe with North Africa and the Middle East, the U.S. with Caribbean Basin countries. Immigration from these neighboring regions is already a concern in Europe and the U.S. Europe has placed much tighter controls on immigration and the U.S. is tacking in this direction. But countering these efforts are growing pressures that stimulate emigration in countries whose populations will continue to grow because of demographic momentum, even though birth rates are now declining (see description of Mexico, page 45).

Trade and financial relationships also channel the effects of internal population pressures across international borders. Young adult age groups are growing fastest in many LDCs, as noted earlier. This means abundant labor and low wages which contribute to the price competitiveness of manufactured goods from many LDCs in international trade. This is one advantage of rapid population growth for LDCs. But it is a problem for their trading partners who industrialized earlier and now have industries having to adjust painfully to increased international competition.

Population pressures complicate the efforts of LDCs to service the large debts that many of them have accumulated. The fiscal and monetary restraint that the International Monetary Fund requires as a condition for continued international financial support is often in conflict with demands for social services and publicly financed infrastructure generated by rapid population growth. Leaders in many LDCs are grappling with choices between meeting social debts to their own populations and interest payments to foreign creditors. The choices are particularly difficult for countries that must also import food for rapidly growing populations. They must maintain their international credit ratings in order to import, but under conditions that leave little latitude for dealing with internal social needs. Their choices will affect the stability of international capital markets and, ultimately, the holdings of investors in developed and developing countries alike.

The pace of the transition to low fertility can shape population age structures in ways that create new problems. An extreme example of this is China, which has pursued a one-child-per-family policy since 1979 after several decades of high fertility. That shift has produced sharp distortions in the country's age structure: a bulge in the age groups that

Low-fertility, aging populations face the problem of who will care for the increasing proportions of elderly in future years.

will reach age 65 in the early 2000s, followed by a much smaller group to provide care for them in their old age, which in China has traditionally been a family responsibility for the younger adult generation. Chinese officials appear to be easing up on the one-child policy, at least partly in recognition of this and other problems associated with the impact of fertility waves on the age composition of the population (see description of China, page 41).

Other LDCs will have increasing proportions of elderly persons as their fertility declines. Most industrialized countries, with 10-15 percent of their populations now aged 65 and over (12 percent in the U.S. in 1985), already face something of China's problem of who will care for the elderly. For the U.S., Canada, Australia, and New Zealand, which all experienced prolonged postwar baby booms followed by fertility declines to below replacement level, the problem is similar to China's: a generation of elderly from about 2015 that will be much larger than the succeeding generation of care providers. Added to this is the fact that women in industrialized countries, who traditionally have provided most care for elderly family members, are increasingly likely to be working during the years of the life cycle when these demands are greatest.[39]

Younger non-native immigrants to countries with aging populations represent one alternative to supplying care for the aged and filling other jobs until recently occupied by younger age groups in those countries. But this option, like immigration generally, raises a host of issues about the ethnic and language composition of the receiving countries, eligibility of immigrants for social services as well as their potential contributions to the tax base at their destination, not to mention effects on the areas they leave. Most of these issues are fundamentally nondemographic, but they are part of the response to demographic processes.

Conclusion

This *Bulletin* has highlighted several important features of current world population trends. First, the post-World War II acceleration of population growth rates in less developed countries is over for most of these countries. High growth rates persist in sub-Saharan Africa and parts of Latin America and South Asia, but there are signs that these regions will soon follow the world trend toward lower growth rates. Second, while growth *rates* have declined, annual *absolute increase* in population continues to mount in many countries and will be large for several decades before tapering off and eventually falling to the low levels that have characterized most of human history. The reason for this is *demographic momentum:* when a population has a large *and* young population base, it takes a generation or more for declining growth rates to offset the numerical effect of high

continued on page 47

Population Prospects of Five Key Countries in the World Population Outlook

At a seminar convened by the Population Reference Bureau in the fall of 1985, experts in five countries that make a difference in the world population outlook were asked to describe the current demographic situation in these countries and answer key questions about their population prospects. The experts and the countries are:

Judith Banister *(Chief, China Branch, Center for International Research, U.S. Bureau of the Census):* CHINA

Arjun Adlakha *(Chief, Asia, Europe, North America and Oceania Branch, Center for International Research, U.S. Bureau of the Census):* INDIA

Edward K. Brown *(Project Officer for West Africa and South Asia, Population, Health and Nutrition Department, World Bank):* NIGERIA

Eduardo E. Arriaga *(Special Assistant for International Demographic Methods, Center for International Research, U.S. Bureau of the Census):* MEXICO

Carl Haub *(Director, Demographic Analysis and Public Information, Population Reference Bureau):* WEST GERMANY

Together with the questions posed, here are highlights from the presentations of the five experts, including their responses to questions from the capacity audience.

Banister: CHINA—*with 21 percent of the world's population in 1985. Will it meet its goal of just 1.2 billion in 2000, while easing its one-child-per-family policy?*

China is a key factor in world population prospects because its population of 1.04 billion in 1985 makes up 21 percent of world population and 28 percent of the population of less developed countries (LDCs). Also, it is so much further advanced than most other LDCs in the demographic transition from high mortality and fertility to low mortality and fertility that many LDCs are looking to it to see what Chinese policies they might adopt or adapt for their own circumstances.

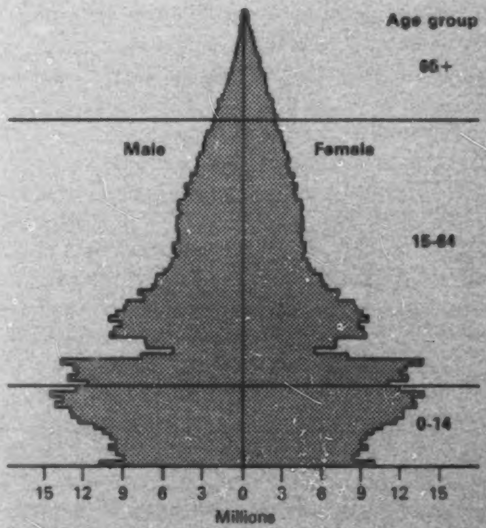
With a vigorous attack on major causes of death and emphasis on preventive and primary health care, China succeeded in increasing life expectancy at birth by more than one year each year from 1949, when the People's Republic was founded, to the mid-1970s. By 1981 life expectancy was between 63 and 66 years for males and 66 to 69 years for females—very good levels for a developing country. Further improvements in mortality will be slower because control of chronic diseases like heart disease, cancer, and stroke is more difficult than the control of infectious diseases that has been achieved.

China's total fertility rate was cut from 5.8 births per woman in 1970 to the replacement level of 2.1 in 1984. This achievement in a decade and a half was accomplished by improvements in the status of women and their greater involvement in the national economy, relatively low infant and child mortality, and a vigorous program of highly publicized, free family planning services and demographic education. Since 1979 the government has also tried to require that most couples stop at one child; this effort has largely succeeded.

Although fertility is at replacement level as of the mid-1980s, the population is still growing by just under 1 percent, or about 9 million, a year because there is a bulge of people in the young childbearing ages. The goal is a population of no more than 1.2 billion in the year 2000. This can be done if the total fertility rate is held at about 1.75 births per woman for most years to 2000. So, with its ability to compel most couples to stop at one or two births, the government is likely to achieve its target.

With population growth reduced to below 1 percent a year, China has solved the problem of increasing food production and overall economic growth faster than population; per capita income and food supplies are expected to increase each year to 2000. The societal costs and burdens of child dependency will lessen as numbers of children decline and the aged dependency burden will increase only slightly as the elderly aged 65 and over increase only from 5 to 7 percent of the total population between the

China Population Age Pyramid, 1982



Source: China State Council Population Office, based on the 10 percent sample of 1982 Census questionnaires.

mid-1980s and 2000. The big shifts in the working-age population are the challenge for the next 15 years. From now to the mid-1990s, entry-level employment must be found for the large cohorts who were teenagers at the time of the 1982 census (see 1982 population age pyramid). Continued meaningful employment will be required for these cohorts by 2000 when they will be in their late twenties and early thirties. With its current economic boom, China is already having some success in alleviating some of the unemployment and underemployment problem. In rural areas, visible unemployment or underemployment is estimated at around 30 percent of the labor force since the commune system was replaced in the early 1980s with the much more efficient agricultural production responsibility system. To alleviate this, the government has opted to introduce agricultural mechanization only gradually.

The government is aware of and planning to deal with the problems caused by the age structure discontinuities resulting from rapid fertility and mortality decline. If fertility were kept strictly to one child per woman over the long term, the total population would decline to about 700 million by about 2050 but some 40 percent of the population would be aged 65 and over. The working-age population might be unwilling or unable to care for an elderly population comprising more than about 20 percent of the total population. The proportion of the aged can be maintained near 20 percent if fertility is kept at or just below replacement level from the mid-1980s to the middle of the next century. With that goal in mind, the government is already easing the one-child policy, which is seen as being for this generation only. The government wishes to prevent almost all couples from having a third or higher order birth, but some couples are now being allowed to have a second birth. A two-child limit for all is expected to be reintroduced after the turn of the century. Also anticipating the problems of aging of the population in the distant future, the government has already set up a national commission on aging.

From China's very large national fertility survey of late 1982, there was some evidence of a disproportionate number of males compared to females among third and higher order births in 1981, suggesting some resurgence of female infanticide or selective neglect of females which was evident from unbalanced sex ratios at most ages in the Chinese population before 1949. The resurgence of this phenomenon has been linked with the one-child policy in force since 1979. But the statistical evidence is indirect and the unbalanced sex ratios could be caused in part by underreporting of female births.

Adlakha: INDIA—*768 million in 1985 and catching up fast with China. Will the leadership's call for a revitalized family planning program result in slower population growth?*

India's population was over 768 million as of mid-1985 and growing at 2.1 percent a year, according to estimates by the U.S. Census Bureau. At this growth rate, resulting from a birth rate of about 34 per 1,000 population and a death rate of 13, India is adding about 16 million persons annually, compared to 9 million in China, and will overtake China as the world's most populous country by 2020, according to current medium projections of the Census Bureau.

India's 1981 census revealed that the annual growth rate had leveled off at just over 2 percent during the 1970s after rising during the 1950s and 1960s as death rates fell faster than birth rates. However, the 1981 total population count was 12 million more than projected by Indian planners. This prompted the nation's political leaders to renew support of the family planning program, which had existed since 1952 but languished since 1977. This stagnation reflected a backlash to the allegedly coercive sterilization drive of 1976-77, which was a major reason for Prime Minister Indira Gandhi's election defeat in March 1977. The 20-point National Health Policy of 1983 set a target for 2000 of a "net reproduction rate of unity"—the equivalent of replacement level fertility of about 2.3 births per woman—down from the current level of about 4.3 births per woman. To achieve this, about 62 percent of couples of reproductive age would have to be "effectively" protected against pregnancy, that is, using modern contraception. As of 1985, the estimated figure was about 32 percent.

The strategy for the reinvigorated family planning program, detailed in the 1982-83 annual report of the Ministry of Health, calls for placing in each village of over 1,000 which is not covered by a health center a voluntary "health guide" to promote family planning and distribute condoms and pills, aided by trained midwives to act as motivators. It also calls for more emphasis on birth-spacing methods, including the pill, and increased incentives; for example, a proposal is that couples accepting sterilization after two children would receive 50 rupees a month (about U.S. $4) or a bond of 100,000 rupees to be cashed after 20 years if the two children are girls. And family planning activities are to be better coordinated with other development plans as well as with maternal and child health services.

Since 1981 the family planning program has made some progress. The percentage of couples "effectively protected," which had hovered at 22-23 percent since 1978, rose to 32 percent by 1985. However, this was four points short of the goal of 36 percent for this year.

The consensus of projections prepared by the Indian government, the United Nations, the World Bank, and the U.S. Census Bureau is that India's population growth rate will decline to about 1.6 percent a year by 2000 and slightly below 1 percent by 2025. Most Indian couples now seem to feel the need for smaller families to meet changing social and economic conditions. The family planning program can reinforce the resulting demand for contraception by providing information and incentives. However, a review of current population projections and expert opinion concludes that replacement level fertility is unlikely by 2000, although it could be reached by 2010. A major reason for this is slow progress in reducing infant mortality and increasing female literacy, which is linked to low family planning acceptance in some of India's most populous states. For example, in the four northern states of Rajasthan, Madhya Pradesh, Uttar Pradesh, and Bihar, comprising almost 40 percent of the total population, only 13 to 18 percent of females were literate in 1981 and infant mortality ranged from 108 to 150 deaths per 1,000 live births. Only 11 to 22 percent of couples were using modern contraception in 1982 and birth rates in 1983 were still 37 to 40 per 1,000 population (see top of table). Thus, reaching reaching the 62 percent of

India and 16 Largest States: Recent Population Statistics

State	Crude birth rate[a] 1983	Percent of couples effectively protected[b] 1982	Percent of literate females 1981	Infant mortality rate[c] 1981
All India	33.6	23.7	28.5	100
Rajasthan	40.0	14.5	13.4	108
Madhya Pradesh	38.5	21.8	18.0	142
Uttar Pradesh	38.4	11.3	16.3	150
Bihar	37.2	12.2	15.8	118
Haryana	35.9	28.6	25.8	101
Assam	34.1	18.3	—	106
Gujarat	34.0	34.9	37.0	116
Orissa	33.3	26.1	24.0	135
West Bengal	31.9	24.4	34.4	91
Jammu and Kashmir	31.4	10.8	—	72
Andhra Pradesh	30.7	27.2	23.2	86
Punjab	30.2	27.4	36.3	81
Maharashtra	29.6	36.7	39.6	79
Karnataka	28.7	24.7	35.3	69
Tamil Nadu	27.8	27.7	39.4	91
Kerala	24.9	32.0	73.4	37

Sources: Official Indian government sources and World Bank.
[a]Births per 1,000 population. [b]Couples of reproductive age using modern contraception.
[c]Deaths under age one per 1,000 live births.

couples practicing contraception which would be required for replacement level fertility seems unlikely by 2000.

Also unlikely is that desired family size will be as low as the two-child norm by 2000. Even in Maharashtra state, where the percentage of couples effectively protected against pregnancy was highest in 1982 at 37 percent, the average ideal number of children reported by women having a sterilization in the early 1980s was 2.0 sons and 1.3 daughters in rural areas and 1.7 sons and 1.2 daughters in urban areas.

In the summer of 1985, Prime Minister Rajiv Gandhi, for the first time since succeeding his mother a year earlier, publicly declared on several occasions that population control is India's biggest problem and called for new strategies to invigorate the family planning program and to upgrade women's education, which he pinpointed as essential to reducing birth rates. In Kerala, with the highest percentage of literate females in 1981, 73 percent, the birth rate was lowest in 1983, 25 per 1,000 population (see table). The leadership's renewed commitment to reducing population growth is a positive development. However, this commitment must be accompanied by appropriate funding and there must be concomitant development, especially in the areas of infant and child survival and female literacy, to achieve faster acceptance of family planning and, in turn, more rapid decline in the country's birth rate.

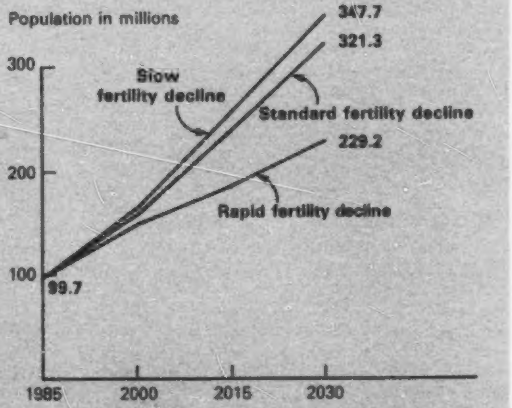
Brown: NIGERIA—*population giant of the world's fastest-growing region. What are the prospects for a population growth slowdown?*

Nigeria, the demographic giant of the world's fastest-growing region, sub-Saharan Africa, is projected by the United Nations to become the world's third most populous country by 2030, after China and India. Estimates of the country's population are necessarily derived from the only officially accepted census so far, that of 1963, when the population was around 55.7 million. The estimate for 1985 is 99.7 million. No state-level estimates are possible.

The birth rate of 1985 is estimated at close to 50 births per 1,000 population and the death rate at 17 per 1,000, yielding a natural increase rate of 3.3 percent a year. With 48 percent of the population under age 15, there is a tremendous built-in momentum for future population growth. The total fertility rate according to the national fertility survey conducted in 1982 as part of the World Fertility Survey is 6.3 births per woman; the World Bank puts it at 6.9 births per woman. At the time of the 1982 survey, only 6 percent of married women aged 15-49 were using contraception. From small-scale surveys, infant mortality is estimated to be 113 deaths per 1,000 live births and life expectancy at birth is put at about 48 years, with the figure slightly higher for females than for males.

Three projections of Nigeria's population from 1985 to 2030, prepared by the World Bank, illustrate the impact of differential timing of fertility decline (see figure). The two highest projections assume that fertility drops to replacement level—a total fertility rate of about 2.1 births per woman or a "net reproduction rate" of one—by 2035. In the "standard" fertility decline scenario, the decline is assumed to begin in 1990 and the

Nigeria's Population, 1985-2030: Three Projections



Source: World Bank projections.

Slow fertility decline = Fertility begins decline in 1995; reaches replacement in 2035.
Standard fertility decline = Decline begins in 1990; reaches replacement in 2035.
Rapid fertility decline = Decline begins in 1985; reaches replacement in 2005.

total population in 2030 would be 321 million—an increase of more than three times in 45 years. If the start of the decline is delayed to 1995, as in the "slow" fertility decline scenario, the population in 2030 would be 27 million more—348 million. The third projection makes the unlikely assumption that fertility declines rapidly, beginning in 1985, to replacement level in 2005; in that case, the population in 2030 would be 229 million—92 million less than in the "standard" scenario.

The prospects for a slowdown in Nigeria's population growth rate hinge on the pace of social and economic development and the level of national commitment to population control. Socioeconomic development is hampered by the severe financial constraints that Nigeria—like most sub-Saharan African countries—is now facing. However, in the past two years there has been a growing consensus among Nigerian leaders that the country's rapid population growth is inimical to economic progress and increased commitment to addressing the issue directly. Privately, also, some Nigerians are coming to realize that the rising costs of children require smaller families, though this is not yet true among the 77 percent of the population living in rural areas.

The leadership has identified adequate birth-spacing as both beneficial to the health of mothers and children and a central factor in slowing population growth. Thus, the Ministry of Health was mandated to prepare a national population policy and program to be incorporated into the forthcoming fifth five-year (1987-1991) development plan. There is now a draft first national population plan of action which includes voluntary family planning as a major component. Among its goals, the plan proposes to encourage marriages delayed until after women reach age 18, promote birth-spacing of at least two years, and reduce the number of pregnancies before age 18 and after age 35. Special targets are to reduce average lifetime births, now over six, to four by the year 2000 and to reduce the current population growth rate of 3.3 percent a year to 2.5 percent by 1995 and 2.0 percent by 2000. In addition, it is proposed to make available suitable family life education and family planning information and services to all adolescents by 2000.

There appears to be increasingly strong leadership commitment to tackling the population problem and there is a good chance that the plan of action will be adopted during 1986.

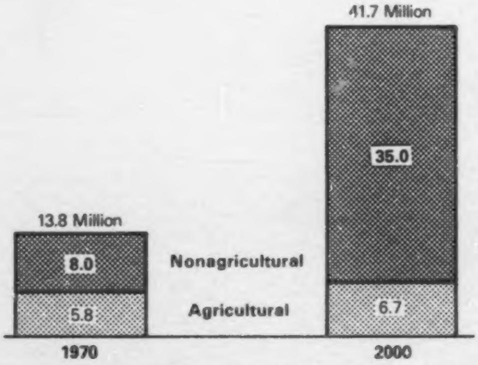
Arriaga: MEXICO—*the U.S.'s populous neighbor. What does Mexico's population future portend for the U.S.?*

After rapid mortality decline during the 20th century, Mexico's life expectancy at birth reached the relatively high level of 67 years by 1980. With the government still encouraging high fertility, the total fertility rate remained at 6.8 births per woman until the early 1970s but then, following implementation of a strong family planning program, fell to 4.3 in 1982. Recent projections by the Center for International Research of the U.S. Census Bureau assume that Mexico's fertility rate will continue to fall to 2.9 in 2000 and 2.3—close to replacement level—in 2010. The rate of natural increase (births minus deaths) is assumed to decline from 2.6 percent a year in 1985 to 1.5 percent about 2010. Despite this slowdown in the growth rate, Mexico's total population is projected to grow from 70.1 million in 1980 to 112.8 million in the year 2000, an increase of 61 percent in 20 years. These projections assume net outmigration of 65,000 a year.

The projected growth in Mexico's labor force portends increasing pressure to migrate out of the country. With underemployment and unemployment at high levels, outmigration—whether documented or undocumented—is already heavy. As a reflection of the national population growth rate some 15 years earlier and declining mortality, the population in the working ages (15-64) is likely to continue to grow at 3 percent a year up to the end of this century. Total numbers in the labor force—persons aged 15 and over who are working or looking for work—are expected to more than double between 1980 and 2000, from 20 million to 42 million.

Since most of Mexico's projected total population growth to 2000 is expected to be

Mexico's Agricultural and Nonagricultural Labor Force, 1970 and 2000



Source: Projections by Center for International Research, U.S. Bureau of the Census.

absorbed by urban areas, most labor force growth in turn will take place in the cities, where unemployment is already particularly high. In the 30 years from 1970 to 2000, the urban population is projected to increase nearly three times, from 30.5 million to 84.6 million. At the same time, if rural and urban economic activity rates remain as they were in 1970, the nonagricultural labor force will increase more than four times, from 8 million to 35 million (see figure). This will create a major increase in the demand for urban jobs which, if it cannot be met by the Mexican economy, is likely to enhance the potential for outmigration.

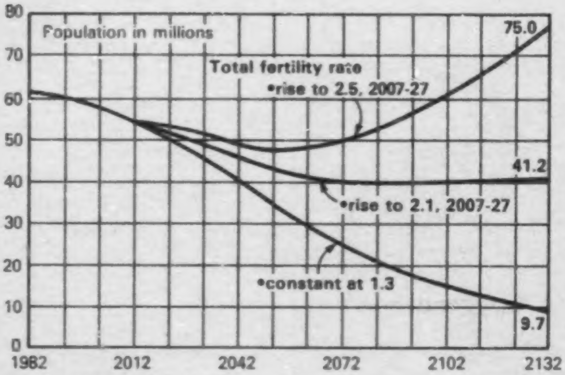
Such a potential is even clearer when compared to the situation in the United States. During the five years from 1995 to 2000, Mexico—with less than 50 percent of the total population of the U.S. at that time—will be adding almost as many people to its labor force each year (1.2 million) as will the U.S. (1.3 million). This situation is inevitable since all Mexicans who will be in the labor force in 2000 are already born. The heavy outmigration of Mexicans seems to be related to the job market. Without a rapid increase in modern jobs available in Mexico, the pressure to migrate out of the country in search of work is only likely to increase.

Haub: WEST GERMANY—*an extreme example of a low-fertility developed country, with the world's lowest total fertility rate and a declining population. What lies ahead?*

West Germany's total fertility rate dropped to 1.3 births per woman in 1984—probably a record low for any country—and has been below the replacement level of 2.1 births per woman since 1969. As a result, the country is now experiencing natural decrease (annual deaths exceed annual births) and net migration has also been outward in recent years, so population numbers are declining. Thus, West Germany can be taken as a dramatic example of what could be in store for other countries of the developed world comprising a quarter of global population if the below-replacement fertility that most of them now have is sustained past the point where birth and death rates meet into a future "beyond the demographic transition." These countries may have to cope with indefinite population decline and aging, just as some less developed countries may never completely stop growing, even though population growth on the world level is likely to balance out at zero in the long run.

Some West Germans see advantages in a small decline in the current population of 61 million crowded into an area the size of the

West Germany's Population, 1982-2132: Three Projections



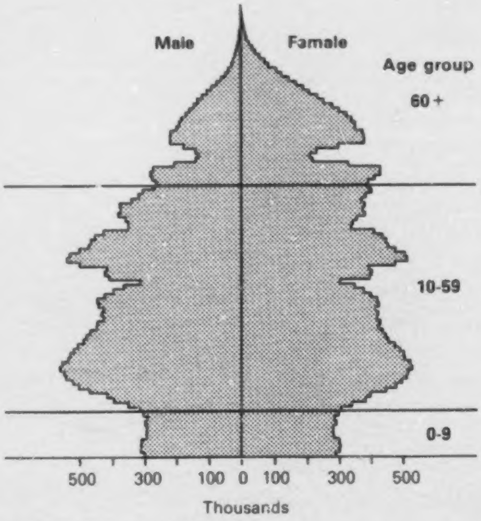
Source: Population Reference Bureau projections.

state of Oregon. But few would welcome the drastic declines revealed by Population Reference Bureau projections for the 150 years from 1982 to 2132. If the total fertility rate were to remain constant at 1.3 births per woman, the population of 2132 would be just 9.7 million—16 percent of its size in 1982 (see projections, bottom line). Even if fertility moves back up to the replacement level of 2.1 by 2007 and stays there, the population would continue to decline, leveling off at about 41 million by 2132 (middle line). This results from what might be called the "reverse momentum" phenomenon—the opposite of the momentum effect which ensures continued population growth for a generation or two after fertility drops to replacement level in populations with disproportionate numbers of young people. The reverse momentum phenomenon means that West Germany's population would continue to decline even if fertility rises above replacement to 2.5 in 2007 and remains there, although in this case, growth resumes after several decades. The population would be back up to its 1982 level of 61 million by 2100 and would be 75 million in 2132.

It has been suggested that West Germany can look to higher fertility among its foreign-born minority to help keep up birth rates. However, immigration of guestworkers has been limited since the recession of the early 1970s and those already in the country have been encouraged to return to their home countries. This policy appears to have been successful; net outmigration was 117,000 in 1982, of which the vast majority was accounted for by the foreign-born. Also, births to the foreign-born have dropped from 20 percent of total births in 1974 to about 12 percent currently.

The likelihood of continued population decline is also evident in West Germany's population age structure as of the end of 1983 (see population pyramid). The youngest cohorts, under age 10, are very small, which means that population decline is inevitable in the next few decades unless births per woman rise dramatically, which is unlikely.

West Germany Population Age Pyramid, December 1983



Source: Federal Statistical Office, Bonn.

This same age structure shows the relatively high proportion in the oldest ages. If fertility were to remain at 1.3 births per woman, by about 2030 some 40 percent of the population would be age 60 or more.

West Germany, like most European countries, is well aware of and concerned about the implications of continued very low fertility. Who will run the nursing homes and fill the labor force of the future? Without immigration, there appears to be no solution.

Conclusion

continued from page 40

growth rates in the past. Third, most (95 percent) of the large future increase in world population will occur in LDCs, including some of the poorest regions of the world—sub-Saharan Africa and South Asia (Bangladesh, India, Pakistan, etc.). Finally, the length and direction of the path toward low population growth rates and eventual stabilization of world population size are not yet fully charted, although there are important economic, social, and political implications for present as well as future generations that depend on the nature of that transition.

Most demographers project substantially lower population growth rates during the next century and attainment of a stable, or nearly stable, world population toward the end of that century. The current "medium variant" long-range projection of the United Nations puts that stabilized world population at about 10.2 billion, reached around 2095, up from an estimated 4.9 billion as of mid-1986. Most industrialized countries already have fertility rates that are lower than the replacement level of about two births per woman and a few are already experiencing natural decrease (fewer births than deaths). While fertility rates have fallen in LDCs, almost all—China's being the major exception—are still well above replacement. The pace of their decline to replacement will determine the ultimate size of these populations when stabilization occurs.

The increases in numbers that have occurred and are likely to occur in LDCs are unprecedented, and a cause of concern to many. Gaps in living standards between less and more developed countries remain large, and the fact that so much of the projected increase in world population will come in LDCs raises the possibility that population growth will stymie efforts to raise living standards among the large proportions of poor people in these countries. Early assessments of the adverse effects of rapid population growth on development, in the 1950s and later, simplified and sometimes overstated the benefits of slower population growth. Linkages between population growth and structure and important developmental variables, such as investments in human and physical capital, have hinged on institutional and political changes whose effects are difficult to quantify in terms that would allow assignment of an independent role to population growth. Rapid population growth appears to play an "accomplice" role in many development problems. Rather than being the root cause of the problem, it exacerbates or magnifies the effects of bad management, poor planning, and scarcity or misallocation of resources.

But while rapid population growth may exacerbate problems, slower growth will not alone solve them. Thus, thinking about the role of population in development and development assistance strategies has shifted toward a more integrated view. This recognizes the complementary and often mutually reinforcing relationships between efforts to slow population growth and other development efforts—to improve people's health, nutrition, and education, upgrade the status of women, increase productivity, introduce better management of agriculture, etc.

Organized efforts to increase access to family planning information and supplies have expanded rapidly over the past two decades and are associated with significant increases in contraceptive prevalence and declining fertility in many LDCs. Here, too, it has been difficult to single out the independent effect of organized program efforts from that of other development variables, such as increasing education and per capita income, because these variables complement and reinforce each other. Research on the determinants of contraception and fertility shows that a growing share of couples want to plan smaller families for reasons of health and achievement of personal aspirations, whether or not they perceive the effects that their actions may be having at the societal level.

The rationale for organized interventions to increase awareness of the benefits of smaller families and increase access to methods for controlling fertility is generally based on the judgment either that the family size that couples feel is best for them is larger than the size deemed best for society or that markets are not doing an adequate job of providing information and services required for couples to achieve the "right" family size. Such judgments involve both factual information about the determinants and consequences of population change and a set of values about the relative weights to be assigned to individual and societal goals, the distribution of wealth and power within and between societies, and the welfare of present generations versus their obligations toward future generations.

The factual questions have turned out to be more complex than many had imagined. Yet those responsible for making decisions about development assistance and strategy have to make choices even if the information to support a given choice is not clear-cut. In the last account, many decisions to intervene in population matters have been based on administrative judgments that involve more common sense than clear-cut research findings.

Since these interventions also involve basic and often conflicting human values—individuals' rights to control their own fertility versus their responsibilities to others—population policy remains a controversial area. If demography and related disciplines can build a better factual base for these judgments, they may help to narrow the realm of controversy. Hopefully, they can better inform the judgments of those concerned with value issues and those who must make decisions for action. □

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POPULATION BULLETIN
Vol. 41, No. 3, July 1986

Population Pressures in Latin America

By Thomas W. Merrick,
with PRB staff

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Abstract—In 1950 Latin America's population of 165 million was on a par with the 166 million of North America (the U.S. and Canada). Two decades of growth at nearly 3 percent a year as mortality declined and fertility stayed high pushed the total to 405 million in 1985, versus 264 million in North America. Despite substantial fertility declines since the 1960s, continued growth is ensured by the demographic momentum built into the region's large and youthful population bases. United Nations medium projections put the 2025 total at 779 million, compared to 345 million in North America. The post-World War II population surge was accompanied by massive rural-urban and international migration, rapid urbanization, large labor shifts out of agriculture into industry and services, increased education for both men and women, and higher female labor force participation. The rural exodus was spurred by extreme land-tenure inequalities and the urban bias of postwar industrialization. The labor-saving bias of this industrialization forced exploding city populations to turn to the informal sector for jobs. Population pressures on city services and housing as well as jobs have been further exacerbated by overconcentration in a few large cities and economic downturns of the 1980s. Some Latin Americans have argued that income and political inequality rather than rapid population growth hinders the region's economic development, but a new view sees both as obstacles. Nineteen countries now support family planning programs to reduce population growth or for other reasons. Recent fertility declines seem to be the result of both increased access to family planning and the economic and social pressures posed by the gap between young adults' aspirations and their ability to realize them. Population and economic pressures could induce faster fertility declines than now projected but in the short run are likely to mean more employment problems, continued rapid urban growth, and even larger international immigration flows within the hemisphere, particularly to the U.S.

Editor: Jean van der Tak
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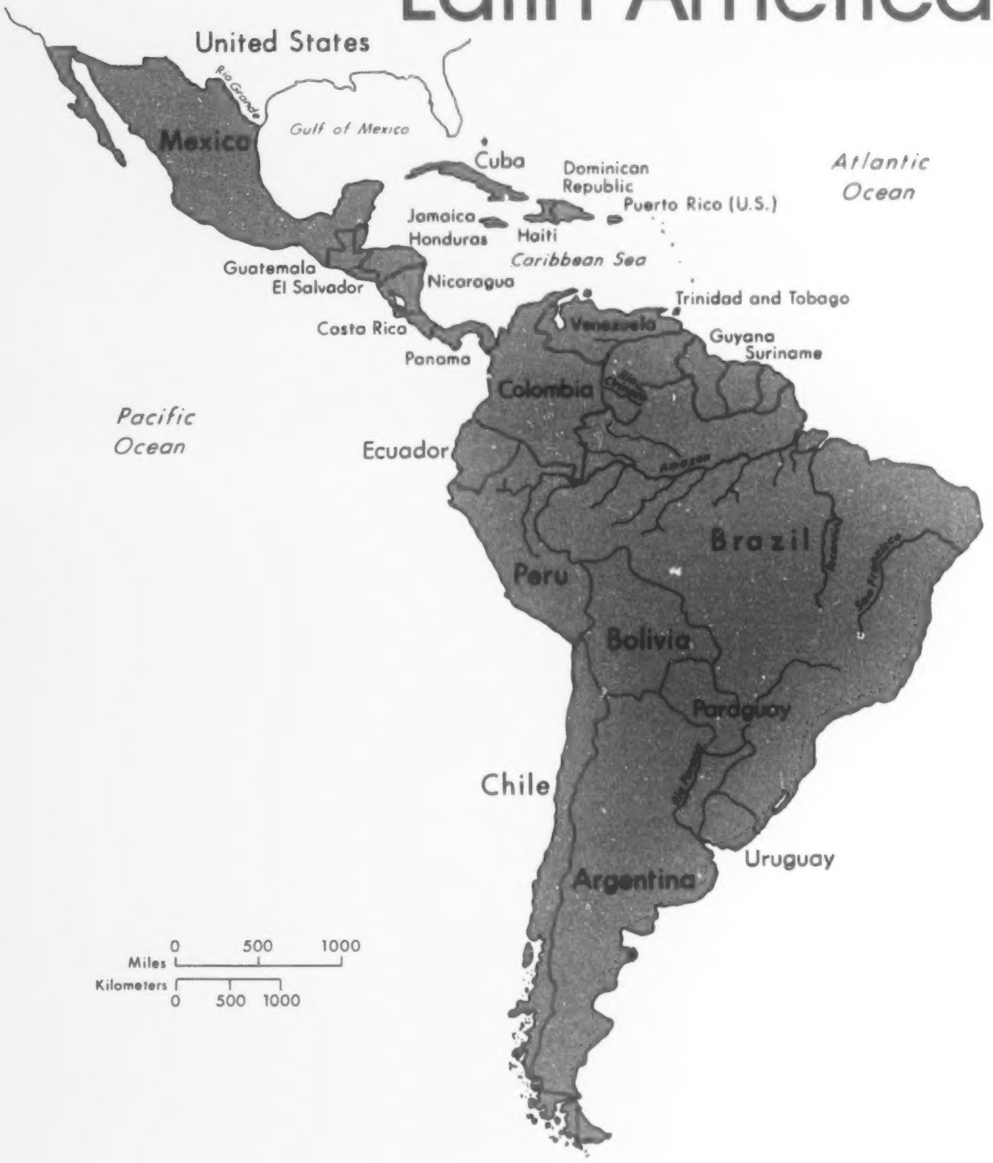
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Population Pressures in Latin America

By **Thomas W. Merrick,** with PRB staff

Thomas W. Merrick is a demographer-economist and President of the Population Reference Bureau. Formerly, he was Director of the Center for Population Research at Georgetown University, where he continues to teach. He has served with the Ford Foundation in Brazil and as consultant to a variety of international agencies. His publications on the causes and consequences of population change in Latin America include Population and Economic Development in Brazil *(Johns Hopkins University Press, 1979) and "Recent Fertility Declines in Brazil, Colombia, and Mexico" (World Bank Staff Working Paper, 1985).*

PRB staff members Mary M. Kent, Research Demographer, Jean van der Tak, Senior Editor, and Alex von Cube, Population Information Specialist, contributed to the Bulletin.

In 1950 the total population of 165 million in countries south of the Rio Grande—what we commonly refer to as Latin America—was virtually the same size as the total 166 million population of North America (the United States plus Canada). Since then Latin America's population has grown much more rapidly, reaching 405 million in 1985 as compared to 264 million in North America. What happens in Latin America is of enormous importance to North America, not only because of our juxtaposition in the Western Hemisphere, but also because of increasing social and economic ties through complex communication and transportation networks and expanded exchange of goods, services, capital, and labor, not to mention our common European heritages, even though the languages differ. This gives Latin America more potential than any other region to influence North America through international economic and social relations.

Geographers are not totally consistent in their definition of what constitutes "Latin" America. Most United Nations publications (and the Population Reference Bureau's *World Population Data Sheet*) define the region as all countries south of the United States, including the English-, French-, and Dutch-speaking countries of the Caribbean Basin and the Commonwealth of Puerto Rico, with its special relationship to the United States. The United Nations Latin American Demographic Center (CELADE) limits its definition of Latin America to 20 countries. These are the 18 countries where Spanish is spoken (but not Puerto Rico), plus Portuguese-speaking Brazil, in South America, and French-speaking Haiti, in the Caribbean. This *Bulletin* follows the CELADE definition when presenting materials on individual countries, although for references purposes, the tables list five more of the larger countries: Guyana, Jamaica, Puerto Rico, Suriname, and Trinidad and Tobago (shown in the Caribbean section of the tables). Regional totals discussed in the text (and shown in Tables 1 and 8) include the other smaller countries of the region in addition to these 25.

The land areas of North America (the U.S. and Canada) and Latin America are about equal in size—7.6 million square miles in the former and 7.9 million in the latter. Wide stretches of the hemisphere are very sparsely populated, so that average population density is low compared to other parts of the world; there are 34 persons per square mile in North America and 51 in Latin America, compared to a world average of 94, and densities of over 400 persons per square mile in Western Europe and South Asia (Bangladesh, India, Pakistan, etc.) The overall average densities for the Western Hemisphere are misleading, however, because they mask the fact that climate, mountains, deserts, and jungles make much of the terrain unsuitable for human settlement. The proportion of land under cultivation is lower in Latin America (9 percent) than in North America (12 percent), and both are well below averages for Europe (29 percent) and South Asia (33 percent). As a consequence, much of the population of both North America and Latin America is concentrated along coasts and river valleys and in other such hospitable areas.

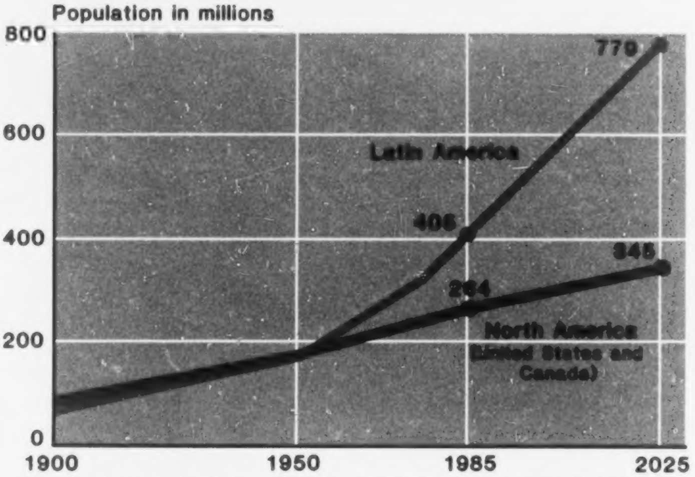
Historically, the Americas have accounted for a very small fraction of the world's total population, but their rate of population growth has been high. In 1750, when the modern expansion of world population began, the population of the two Americas together was only 2 percent of the world's total. Two centuries later, in 1950, that fraction was over six times greater at 13.2 percent, divided equally between Latin America and North America. By 1985 Latin America's 405 million made up 8.4 percent of the total world population of 4.8 billion while North America's 264 million had reduced its share to 5.5 percent. The southward shift in the Western Hemisphere's population balance continues. Even though population growth rates in Latin America slowed during the 1970s, United Nations medium variant projections show the number increasing to 779 million by the year 2025, compared to 345 million in North America (see Figure 1). Long-range projections suggest that Latin America's population could exceed a billion by the time it eventually stabilizes late in the 21st century, while the corresponding projection for North America is 382 million.

Latin America's rapid post-World War II population growth has been accompanied by rapid urbanization and internal population redistribution, large shifts of labor out of agriculture into manufacturing and service industries, increased education for both men and women, and more involvement of women in work outside the domestic and farm economy. While most countries in Latin America are still considered "less developed" by comparison with North America and Europe, demographic as well as social and economic patterns in the region fall between what is typical of either more or less developed countries. Indeed, the diversity of the region makes it difficult to characterize it using such categories.

The acceleration of Latin America's population growth in the first two decades after World War II resulted from a combination of declining mortality and continued high birth rates, which has been true for many developing areas. However, Latin America's population growth was also comparatively high before 1950, initially because of European immigration and later because of mortality declines that were under way before World War II. Latin America is much more urbanized than other developing areas and during the 1920s living standards in the southern cone of the region were comparable to those in Europe.

The region is also rich in ethnic and cultural diversity. Four major population groups have contributed to its racial and ethnic stock. The first group, Latin America's indigenous Indian population, includes groups that had developed organized agriculture and urban systems in pre-Columbian Middle America and the Andean region. Their numbers were comparatively large in the 1400s, but suffered severe decline as a result of disease and hardships during the early colonial period. Descendants of Spanish and Portuguese colonists, called *criollos*

Figure 1. Population Growth in Latin America and North America: 1900-2025



Sources: 1900: Based on estimates by Alexander M. Carr-Saunders, John D. Durand, and Walter F. Willcox cited in United Nations, *The Determinants and Consequences of Population Trends* (New York: 1973). After 1900: UN, *World Population Prospects: Estimates and Projections as Assessed in 1984*, medium variant, forthcoming.

in Spanish, were politically and economically dominant from the 16th to 19th centuries, but this group was not large.

In Brazil and the Caribbean, where indigenous populations were too few in number or too primitive to exploit as workers to produce colonial exports, slaves were imported from Africa to fill labor shortages, so that with the abolition of slavery at the end of the 19th century their descendants represented a third major group in the region's ethnic heritage. The fourth group emerged from European immigration at the end of the 19th and beginning of the 20th century, completing Latin America's ethnic makeup. Intermarriage between groups has contributed to further diversification of its ethnic and cultural matrix.

Most Latin American countries achieved political independence during the first quarter of the 19th century; however, their economic dependence continued until well into this century. After independence, Great Britain and later the United States replaced the Iberian Peninsula as the centripetal forces in the economic and political affairs of many Latin American countries. Export-oriented agriculture and mining, producing coffee, wheat, beef, tropical fruits, and gold, silver, copper and oil, were organized in a network of *haciendas*, plantations, and mining communities that provided the foundation of Latin American society until well into the 20th century. Most manufactured goods were imported from Europe and the U.S. Export economies brought prosperity for some Latin American countries, but for most they simply perpetuated archaic economic and social structures held over from the colonial period.

Two world wars, the Great Depression of the 1930s, and a shift in the terms of international trade in favor of economies producing manufactured goods exposed major weaknesses in the export model. Beginning in the 1930s, and with renewed vigor after World War II, Latin American countries sought to develop a capacity to produce their own manufactured goods. Import-substituting industrialization was the dominant economic policy during the early postwar period. With it came rapid urbanization and internal population redistribution. By the 1970s rural population was declining in actual numbers as well as proportionately in several Latin American countries.

The postwar acceleration of population growth coincided with this import-substituting industrialization and rapid urbanization. With the structural shifts in economic activity, city populations grew even more rapidly than the population as a whole; because of archaic land-tenure systems and economic policies biased against agriculture, rural areas could absorb little of the population increase. Rapid population growth and redistribution have raised many concerns about their adverse effects on development in the region—concerns about adequate provision of education, housing, and health services, overloading of urban transportation systems and other infrastructure, and the critical issue of employment.

Postwar industrialization was based largely on imported labor-saving technology. This had advantages in not having to develop technologies locally and being competitive with producers in other industrialized countries, but it also meant there were fewer new jobs for the swelling masses of would-be workers in Latin American cities. As a result, service industries and the informal economy grew rapidly, often acting as a cushion for excess labor supply (or as a mask for underemployment).

While Latin America's population grew faster during the 1950s and 1960s than that of most other developing areas, there was a general reluctance to view this growth as *too* rapid. Indeed, distribution rather than growth was and continues to be a major population policy concern. Latin American views on population need to be regarded in light of the region's history. For most of this history, labor shortages rather than excesses have been of most concern and although the average population densities are misleading, Latin Americans still see their region as sparsely populated compared with the rest of the world. Political control over vast and sparsely settled areas required inhabitants—a philosophy summed up in a phrase of Juan Bautista Alberdi that was incorporated in Argentina's constitution of 1853—gobernar es poblar (to govern is to populate).

This *Bulletin* examines the main demographic changes in Latin America since World War II and their links to economic and social changes in the region as well as their implications for international economic and social relations, particularly with North America. It looks at overall population growth and the fertility, mortality, and migration patterns that have shaped this growth in various parts of the region; marriage, family, and household patterns; urban and rural population trends and internal population redistribution; employment and education trends; international migration; population policies; and what lies in store for the future.

The basic sources of information on postwar population trends in Latin America are censuses, surveys, and vital registration data. All of the larger countries in the region have taken at least two censuses since 1950 and several have conducted them each decade. The recording of births, deaths, and marriages has not been as good, since the reporting of these events has generally not been complete or up to date. Questions in censuses and surveys provide data for indirect estimates of fertility and mortality that are regarded as being more accurate than registration data. CELADE, the United Nations Latin American Demographic Center in Santiago, Chile, has been compiling, evaluating, and analyzing demographic data for the region since 1957. Periodic summaries of CELADE's demographic estimates for the region are published in its *Boletín demográfico*. Because of their greater comparability, these summaries rather than original country census and survey results are reported in most tables of this *Bulletin*. (Note that CELADE summaries may not always agree with official country reports because CELADE has corrected for underreporting and misreporting and has adjusted data to a common reference date.)

Table 1. Population Growth in Latin America: 1930-1985

Subregion and country	Population (thousands)				Average annual growth (percent)		
	1930	1950	1965	1985	1930-50	1950-65	1965-85
Total	107,408	164,810	249,125	404,806	2.14	2.75	2.43
South America							
Argentina	11,896	17,150	22,283	30,564	1.83	1.75	1.58
Boliva	2,153	2,766	3,841	6,371	1.25	2.19	2.53
Brazil	33,568	53,444	84,292	135,564	2.33	3.04	2.38
Chile	4,424	6,091	8,571	12,038	1.60	2.28	1.70
Colombia	7,350	11,597	18,114	28,714	2.28	2.97	2.30
Ecuador	2,160	3,310	5,162	9,378	2.13	2.96	2.99
Paraguay	880	1,371	2,019	3,681	2.22	2.58	3.00
Peru	5,651	7,632	11,467	19,698	1.50	2.71	2.71
Uruguay	1,704	2,239	2,693	3,012	1.37	1.23	0.56
Venezuela	2,950	5,009	8,970	17,317	2.65	3.88	3.29
Mexico and Central America							
Costa Rica	499	858	1,482	2,600	2.71	3.64	2.81
El Salvador	1,443	1,940	3,005	5,552	1.48	2.92	3.07
Guatemala	1,771	2,969	4,568	7,963	2.58	2.87	2.78
Honduras	948	1,401	2,304	4,372	1.95	3.32	3.20
Mexico	16,589	27,376	43,500	78,996	2.50	3.09	2.98
Nicaragua	742	1,098	1,750	3,272	1.96	3.11	3.13
Panama	502	893	1,326	2,180	2.88	2.64	2.49
Caribbean							
Cuba	3,837	5,858	7,808	10,038	2.12	1.92	1.26
Dominican Republic	1,400	2,409	3,729	6,243	2.71	2.91	2.58
Guyana	309	423	645	953	1.57	2.81	1.95
Haiti	2,422	3,097	4,137	6,585	1.23	1.93	2.32
Jamaica	1,009	1,403	1,760	2,336	1.65	1.51	1.42
Puerto Rico	1,552	2,219	2,594	3,451	1.79	1.04	1.43
Suriname	170	215	332	375	1.17	2.90	0.61
Trinidad & Tobago	405	636	896	1,185	2.26	2.28	1.40
Others[a]	1,074	1,406	1,877	2,368	1.35	1.93	1.16

Sources: Centro Latinoamericano de Demografia (CELADE), *Boletin demografico*, Nos. 27 and 36 (Santiago, Chile: 1981 and 1985); United Nations, *World Population Prospects as Assessed in 1963*, medium variant (New York: 1966); UN, *World Population Prospects: Estimates and Projections as Assessed in 1984*, medium variant, forthcoming.

[a] Includes English-, French-, and Dutch-speaking Caribbean countries and territories not listed individually in table.

Major Demographic Trends: 1950-1985

The 1930s closed an era during which immigration contributed most to Latin American population growth and ushered in a period of rising natural increase (the excess of births over death), which accelerated after World War II. From 107 million in 1930, the population of the region grew to 165 million in 1950 and then surged to 405 million in 1985 (see Table 1). The average annual growth rate, which had been 2.14 percent during the 1930s and 1940s, jumped to 2.75 percent between 1950 and 1965 and then declined moderately to 2.43 percent a year between 1965 and 1985.

Growth rates in 13 of the region's 25 countries shown in Table 1, and in the smaller countries not listed individually ("others"), followed this overall pattern of a rise and then a fall over the three intervals shown in the table. The rates declined consistently in four countries—Argentina, Uruguay, Cuba, and Jamaica—and rose in seven others —Bolivia, Ecuador, Para-

Table 2. Average Annual Birth and Death Rates in Selected Five-Year Intervals: 1930-1985

(Rates are per 1,000 population)

Subregion and country	1930-35		1945-49		1960-65		1980-85	
	Birth rate	Death rate	Birth rate	Death rate	Birth rate	Death rate	Birth rate	Death rate
South America								
Argentina	28.9	11.6	25.2	9.6	23.2	8.8	24.6	8.7
Bolivia	—	—	47.1[a]	24.1[a]	46.1	21.5	44.0	15.9
Brazil	—	—	44.6[a]	15.1[a]	42.1	12.3	30.6	8.4
Chile	40.2	24.5	37.0	17.5	36.4	11.8	22.7	6.7
Colombia	43.3	22.5	43.4	20.8	44.6	12.2	31.0	7.7
Ecuador	48.5	25.7	45.9	20.0	45.6	14.3	36.8	8.1
Paraguay	—	—	45.5[a]	15.5[a]	42.2	11.9	36.0	7.2
Peru	—	—	44.9	24.7	46.3	17.6	36.7	10.7
Uruguay	22.3	11.6	19.7	9.1	21.9	9.6	19.5	10.2
Venezuela	39.9	21.9	43.6	16.1	44.2	9.1	33.0	5.5
Mexico and Central America								
Costa Rica	44.6	21.5	42.7	13.2	45.3	9.1	30.5	4.2
El Salvador	46.5	32.7	44.8	22.8	47.4	15.3	40.2	8.1
Guatemala	46.2	31.7	49.1	26.5	47.8	18.3	42.7	10.5
Honduras	42.0	21.7	44.5	19.0	50.9	17.7	43.9	10.1
Mexico	44.1	26.7	44.5	17.8	44.9	11.3	33.9	7.1
Nicaragua	—	—	54.1[a]	22.7[a]	50.3	17.1	44.2	9.7
Panama	37.4	15.1	38.3	10.8	40.8	9.6	28.0	5.4
Caribbean								
Cuba	31.3	13.3	30.0	8.7	35.3	8.8	16.9	6.4
Dominican Republic	—	—	49.1[a]	21.8[a]	47.7	15.4	33.1	8.0
Guyana	—	—	48.1[a]	13.5[a]	40.4	8.6	28.5	5.9
Haiti	—	—	45.5[a]	26.8[a]	44.4	21.6	41.3	14.2
Jamaica	33.6	18.1	31.2	13.5	39.6	9.1	28.1	5.6
Puerto Rico	40.6	21.1[b]	41.0	12.2	31.3	6.9	21.7	6.6
Suriname	—	—	43.8[a]	12.6[a]	44.4	10.3	28.8	6.8
Trinidad & Tobago	30.3	18.9	38.7	13.2	38.0	7.7	25.4	7.0

Sources: 1930-35 and 1945-49: O. Andrew Collver, *Birth Rates in Latin America: New Estimates of Historical Trends and Fluctuations* (Berkeley, Cal: Institute of International Studies, University of California, 1965) and UN, *World Population Prospects as Assessed in 1963*, medium variant; 1960-65 and 1980-85: UN, *World Population Estimates and Projections as Assessed in 1984*, medium variant.

[a] Data are for 1950-55 from UN, *1984 Assessment*. [b] Rate is for 1932-34.

guay, Peru, El Salvador, Nicaragua, and Haiti. Even in countries where growth rates declined after 1965, the level remained high—3 percent and more a year in Venezuela, Honduras, and Mexico, for example. A population growing at 3 percent a year doubles in 23 years.

Death rate trends

Declines in death rates that accelerated population increase were already under way in some countries during the 1930s, but in most they came after World War II. Table 2 presents birth and death rates for four benchmark periods, beginning with the early 1930s and ending in the early 1980s. Death rates were already comparatively low by the 1930s in Argentina, Cuba, probably also Uruguay, and to a lesser extent in Panama. For the rest of the region, they generally ranged from 20 to 30 deaths per 1,000 population until after World War II. Some decline is suggested in the years immediately after the war by data for 1945-49, but the big declines came between then and the early 1960s. Data for 1960-65 show that by then the rates were down to the low teens in eight more countries—Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay, and Venezuela. Lagging countries were Bolivia and Peru in South America, as well as the Dominican Republic and Haiti in the Caribbean, and most of Central America. By the 1980s only Bolivia and Haiti had death rates that were substantially above 10 per 1,000 population.

Birth rate trends

Generally, birth rates remained very high until the 1960s. Between 1960 and 1965, they still ranged in most countries from 45 births per 1,000 population and upward. There is evidence that because of rising marriage rates and declining mortality, birth rates actually increased in several countries between the 1930s and the 1950s. Combined with death rates that were approaching or in the low teens, the high birth rates of the early 1960s produced rates of population growth that exceeded 3 percent a year. Again, the exceptions were Argentina, Cuba, and Uruguay, which already had lower birth rates by 1950, and Chile and Panama, whose rates were below the regional average during the 1950s, although apparently not declining. The rise in Cuba's birth rate from 30 to 35 per 1,000 population between 1945-49 and 1960-65 reflects the baby boom of the early 1960s that followed its 1959 revolution.[1] The simultaneous rise in the birth rates of several other countries probably reflects the increasing survival of women of reproductive age as death rates declined.

After 1965 birth rates started to fall in a number of countries. Cuba led, with an 18-point decline—from 35 to 17 births per 1,000—between the early 1960s and the early 1980s. Chile and Costa Rica were also forerunners in the 1960s, with Brazil, Colombia, Panama, and Venezuela following by the late 1960s and the Dominican Republic, Ecuador, Mexico, Paraguay, and Peru during the 1970s. A few countries that lagged in mortality decline—Bolivia, Haiti, and most in Central America—also had lesser declines in birth rates.

Youthful age structures

In addition to generating very high rates of population growth, Latin America's high birth rates produced very youthful population age structures. As seen in Table 3 (page 10), in 1960 the proportion of population under age 15 was at least 40 percent and generally more than 45 percent in all countries except Argentina, Uruguay, and Cuba. Declining birth rates reduced this proportion, in some cases very substantially. In Costa Rica, for example, the proportion under age 15 dropped from 48 percent in 1960 to 37 percent in 1985.

Age structure is one of the principal ties between demographic processes and socioeconomic changes. One measure of the potential economic and social impact of age structure is the age-dependency ratio, which is a rough approximation of the ratio of "pure consumers" in an economy—those under age 15 and aged 65 and over—to those who both produce and consume—individuals aged 15 to 64—usually expressed as a percentage. In theories about the effect of rapid population growth on economic development, a high dependency ratio is viewed as a threat to economic growth because it drains resources away from productive investment and puts pressures on social services used heavily by younger and older people, such as schools and health facilities.

In 1960 dependency rates were close to 100 percent in most Latin American countries, compared with 33 percent currently in the United States, for example (where the rate is rising because of a growing proportion of people aged 65 and over). Declining birth rates reduced these figures in most countries. Again, Costa Rica provides a dramatic illustration, with the rate falling from 102 percent in 1960 to 72 in 1985. Significant declines also occurred in other countries, but the rates rose in some. In Argentina and Uruguay, where fertility has been relatively low for some time, this reflects

Table 3. Population Under Age 15 and Age-Dependency Ratio: 1960 and 1985

Subregion and country	Percent of population under age 15		Age-dependency ratio[a] (percent)	
	1960	1985	1960	1985
South America				
Argentina	30.8	31.0	57.1	65.4
Bolivia	42.9	43.8	85.4	88.5
Brazil	43.3	36.2	86.7	68.6
Chile	39.4	30.2	77.6	55.9
Colombia	46.3	37.2	97.5	69.3
Ecuador	44.8	41.8	95.3	80.8
Paraguay	46.0	41.7	97.3	82.7
Peru	43.3	40.8	87.8	79.7
Uruguay	27.9	26.9	56.2	60.3
Venezuela	46.1	39.5	94.4	70.9
Mexico and Central America				
Costa Rica	47.5	36.7	101.9	72.1
El Salvador	45.1	44.6	92.2	92.2
Guatemala	46.0	45.9	94.9	95.0
Honduras	45.6	46.9	91.4	99.2
Mexico	45.6	42.2	96.0	84.3
Nicaragua	48.0	46.7	101.2	97.1
Panama	43.5	37.6	90.5	72.5
Caribbean				
Cuba	34.4	26.4	64.4	52.1
Dominican Republic	46.6	39.7	98.8	75.2
Guyana	48.5	37.0	107.5	69.2
Haiti	40.9	43.6	81.3	87.7
Jamaica	41.7	36.8	85.2	74.4
Puerto Rico	42.7	30.0	91.9	61.0
Suriname	47.6	42.6	104.9	88.9
Trinidad & Tobago	43.0	31.6	88.7	59.7

Source: CELADE, Data Files, 1986.

[a] The age-dependency ratio is the sum of the population under age 15 and 65 and over divided by the population aged 15-64, expressed as a percentage.

an increase in the proportion of population aged 65 and over—as in the U.S. In Cuba, a similar aging effect on the dependency ratio was offset partially when the 1960s baby boom cohort reached working ages. Other Latin American countries will eventually experience the aging effect. Adequate assessment of the impact of dependency requires separation of the youth and old age components; as the experience of Europe and North America shows, the needs of the two groups are distinct, and often in competition for scarce public service resources.

Summing up the main features of Latin American population growth over the past several decades, three regional patterns emerge from the data. The *first* pattern reflects the experience of countries with earlier and more gradual declines in birth and death rates and generally lower overall rates of population increase. This group includes Argentina, Cuba, and Uruguay, with Chile and Panama as borderline cases. The *second* group consists of countries whose death rates declined rapidly during the 1950s and which also experienced declining birth rates after 1960. Brazil, Colombia, Costa Rica, the Dominican Republic, Mexico, Paraguay,and Venezuela fit here. Ecu-

Table 4. Life Expectancy at Birth, Selected Dates: 1930-1985

(Years)

Subregion and country	1930	1950	1965-70	1980-85
South America				
Argentina	48.5	61.1	66.0	69.7
Bolivia	34.7	43.1	45.1	50.7
Brazil	34.0	43.0	57.9	63.4
Chile	35.2	48.5	60.6	69.7
Colombia	34.2	48.5	58.4	63.6
Ecuador	—	47.9	56.8	64.3
Paraguay	34.5	45.8	59.5	65.1
Peru	—	39.9	51.5	58.6
Uruguay	—	68.8	68.6	70.3
Venezuela	32.5	52.6	63.7	69.0
Mexico and Central America				
Costa Rica	41.9	55.5	65.6	73.0
El Salvador	28.7	47.2	55.9	64.8
Guatemala	26.6	40.7	50.1	59.0
Honduras	34.0	42.7	50.9	59.9
Mexico	33.9	47.6	60.3	65.7
Nicaragua	28.6	40.1	51.6	59.8
Panama	35.9	50.2	64.3	71.0
Caribbean				
Cuba	41.5	55.8	68.5	73.4
Dominican Republic	26.1	43.7	55.4	62.6
Guyana	41.5	54.7	62.5	68.2
Haiti	—	39.4	46.2	52.7
Jamaica	—	57.3	66.3	73.0
Puerto Rico	41.5	—	70.8	74.0
Suriname	—	—	63.5	68.0
Trinidad & Tobago	45.7	57.4	65.7	68.7

Sources: 1930 and 1950: Eduardo E. Arriaga, *New Life Tables for Latin American Populations in the Nineteenth and Twentieth Centuries* (Berkeley, Cal.: Institute of International Studies, University of California, 1968) and United Nations, *Demographic Yearbook*, various issues; 1965-70 and 1980-85, UN, *World Population Estimates and Projections as Assessed in 1984*, medium variant.

ador and Peru are borderline cases because of their delayed declines in mortality, but seem to be catching up with fertility decline. As a whole, the second group experienced two decades of very rapid population growth after World War II, but shows definitely slower growth during the 1970s and 1980s. The *third* group consists of Bolivia, Haiti, and four Central American countries—El Salvador, Guatemala, Honduras, and Nicaragua—all late starters in mortality decline and still well behind the rest of the region in fertility declines. The Central American countries have experienced the region's highest and most sustained population increase in the postwar period.[2]

Mortality Decline

In 1930, with death rates still generally high, the life expectancy of Latin American populations was far below that of Europe and North America. In most countries for which data are available, life expectancy at birth was around 35 years, a level attained by Northwestern Europe before 1850 and by the rest of Europe around 1900. There was also considerable variation within the region (see Table 4). Argentina's life expectancy at 49 years was close to the level in Southern Europe at the time. Costa Rica and Cuba were also above average, with life expectancies over 40, while much of the rest of Central America and the Dominican Republic lagged behind with figures below 30.

After 1930 gains in life expectancy accelerated and intraregional differences narrowed. Underlying both trends was a weakening of the link between living conditions and mortality brought about by the spread of public health measures and new means of prevention and treatment of infectious diseases. The main demographic consequence of these changes was an acceleration in the rate of population growth, because death rates were declining while birth rates remained high. In fact, birth rates increased slightly as a consequence of mortality decline because of increased survival from birth to the end of the childbearing ages.

Differences in living conditions accounted for most of the variation in life expectancy in Latin America before 1930. Countries which had experienced rising living standards during the export period and invested a portion of their export earnings in improving environmental conditions experienced earlier mortality decline. In most instances, these improvements were limited to country capitals and/or principal port cities, many of which had been ravaged by epidemics of cholera and yellow fever during the early years of the export expansion. Pressures from both the criollo elites and resident Europeans prompted the building of water and sanitation systems and the drainage of mosquito-infested swamps and marshes around these cities. Europeans were especially vulnerable during epidemics because they lacked the natural immunity acquired by natives who had been exposed earlier in life and survived. Smallpox vaccine was also introduced during this period. While these measures could be regarded as public health interventions, they depended for the most part on the prosperity that the export boom generated for the urban elites and had little impact on the rural masses who provided the labor for production of agricultural exports.

Immigration was also a factor. Mortality was generally lower in the countries where immigration contributed to population growth during the export period. Immigrants were probably healthier than other groups, particularly the indigenous and slave and former-slave populations. At the very least, immigrants had survived to the young adult ages during which most made their moves to the New World; they were also better educated and lived better than other groups, except the urban elite. The abolition of slavery in Brazil and Cuba may also have contributed to a lowering of mortality during the 1890s.

After 1930, and especially in the period immediately after World War II, private and public international assistance agencies introduced new methods for treatment of infectious diseases and contributed to the spread of public health measures designed to control disease vectors. Before the war, malaria was endemic to much of tropical Latin America. During the 1940s, international agencies, led by the Pan American Sanitary Bureau (later the Pan American Health Organization), mounted a major effort to eradicate malaria-bearing mosquitos by spraying swamps and marshlands with DDT, which in combination with treatment of people already infected with the disease, led to dramatic declines in malaria deaths. The introduction of sulfa drugs and penicillin to treat other infectious diseases reduced mortality rates from tuberculosis, pneumonia, and influenza. Vaccines were introduced to immunize populations against measles, diphtheria, tetanus, and typhoid.

The result was a dramatic increase in life expectancy in the region between 1945 and 1965, along with a narrowing of some of the differentials that previously had been associated with differences in living conditions. By the late 1960s, most Latin American countries had life expectancies at birth of around 60 years, although Bolivia and Haiti were still far below average at 45 and 46 years, respectively, and Guatemala, Honduras, and Nicaragua in Central America, as well as Peru, still lagged at around 50 years. Compared to 1930, gains of 10-15 years of life expectancy had occurred in most countries. Improvements since 1970 have been much slower, mainly because deaths due to causes other than infectious diseases now account for a larger proportion of the total and these deaths are less likely to be averted using the types of interventions that were effective against infections.

The largest absolute declines in death rates occurred among young children and adults over 40, while the declines were proportionately greater for older children and young adults.[3] Death rates for older children and young adults were already low compared to the rates for infants and older people, so that the larger percentage declines in their rates resulted in absolute cuts that were a fraction of those in the rates for infants and older age groups. Among young adults, mortality declined somewhat more for females than males. Eduardo Arriaga, an expert in Latin American mortality trends, attributes this difference to continued higher male mortality due to accidents and violence rather than reductions in female deaths resulting from complications of pregnancy.[4]

Contributing most to the increases in life expectancy were reductions in deaths from "name" infectious diseases—cholera, diphtheria, malaria, measles, tuberculosis, typhoid, typhus, whooping cough—but declines in deaths from respiratory disease—bronchitis, influenza, pneumonia—and from diarrhea were also important. Alberto Palloni has estimated that 21 percent of the mortality decline between 1950 and 1973 in Latin American countries reporting deaths by cause was accounted for by declines in deaths from infectious diseases, 11 percent by reductions in respiratory-related deaths, and 10 percent by the drop in deaths due to diarrhea.[5] Arriaga and U.S. demographer Samuel Preston report similar findings.[6]

The slowing of mortality declines in Latin America since the late 1960s has stirred renewed interest in the role of living conditions in mortality differentials, particularly those associated with income class differences within Latin American countries. Overall statistics suggest that the link between mortality and living conditions (as measured by per capita income) was weaker in 1960 than in 1930,[7] but the persistence of mortality differences between high- and low-income groups within countries suggests that medical interventions and innovations have benefited the rich more than the poor.

Overall death rates in Latin America are lower and life expectancy is higher than in other developing regions, but this is in part because such large proportions of country populations consist of the younger age groups with naturally lower mortality. Class differentials in mortality indicate that there are still health problems (see Box 1, page 14). Future gains in life expectancy are likely to depend not so much on the introduction of new health technology as on increasing low-income groups' access to health services and improving the adverse living conditions that account for their poor health and higher mortality.

Fertility Trends and Differentials

In most Latin American countries, fertility rates remained high until at least the mid-1960s. Even in the early 1970s there was considerable doubt about whether and when Latin America would experience a transition to lower fertility. During Europe's demographic transition in the 19th century, there was a lag of about a generation between the decline of mortality and the onset of fertility decline. According to demographic transition theory, the same social and economic progress that led to lower mortality brought subsequent reductions in fertility. Skeptics of the theory's applicability to Latin America pointed out that here public health mea-

Box 1. Class Differentials in Infant Mortality

Infants and young children are more susceptible than any other age groups to infectious diseases associated with malnutrition and unsanitary living conditions and, because of their low body weights, they are more likely than older people to die from these infections without prompt medical attention. In fact, infant and child mortality rates are so sensitive to income and living conditions that they are often used as indicators of socioeconomic development. Latin American infant mortality rates fell by 30 to 50 percent between 1950 and 1985, but the current average rate for the region, 62 deaths under age one per 1,000 live births, is still about six times the level of developed countries, and the rates range from as low as 11 in Barbados to over 100 in Bolivia and Haiti.

Persistent gaps between rich and poor are major obstacles to lowering infant mortality, as indicated by studies that show wide disparities in the rates between income and education groups. Education of the mother is strongly related to the health and survival of her children, both because a woman with some schooling knows more about sanitation and medical care and because she is more likely than an uneducated woman to be in a higher income group enjoying a healthier life style and to live in an urban area where medical services are more accessible. A study in seven Latin American countries showed that children of mothers with no schooling were three to five times more likely to die before their second birthday than those born to mothers with at least ten years of schooling (see figure).

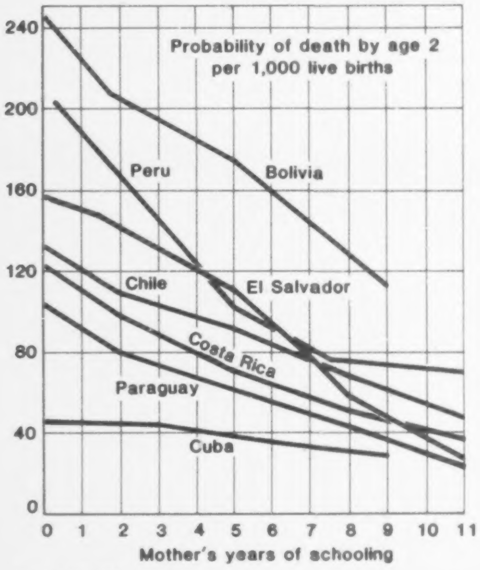
Furthermore, the majority of children in many Latin American countries are born into the higher-risk, low-income groups. This is partly because these groups often represent the largest share of the total population, but also because low-income women tend to have higher fertility and produce a disproportionate share of annual births. High fertility contributes to high infant mortality because births are likely to be closely spaced. Studies have shown that children born less than two years apart have high risks of birth defects and of death in infancy or early childhood. Infant nutritional intake can suffer if breastfeeding is curtailed because of a new pregnancy and maternal health is de-

sures had reduced mortality while social and economic development was lower than it had been in Europe when mortality declined and argued that the region's birth rates were thus not likely to fall without deliberate and strenuous publicly supported efforts to reduce fertility.

Early defenders of demographic transition theory were more optimistic about prospects for fertility decline in Latin America, calling attention to wide variations in the timing of mortality and fertility declines in Europe, to similar variations in Latin America, and to the far-reaching social and economic changes occurring there since World War II, especially rapid urbanization, rising average incomes, and increased educational levels. Looking back during the early 1970s, Stanford University demographers Steven Beaver, Frank Oechsli, and Dudley Kirk found strong ties between Latin America's fertility levels in the 1960s and a variety of socioeconomic indicators, which suggested that fertility declines would not be long in coming.[8] Oechsli and Kirk argued that a number of the countries had experienced social and economic changes that put them on the threshold of rapid fertility decline, and Beaver predicted that once fertility decline got under way, it would be at least as rapid as the region's recent decline in mortality.

Fertility trends during the 1970s support their views. Prior to 1965 the total fertility rate (the average number of children women would have altogether at current fertility rates) was usually over 6 children per woman, and over 7 in many countries (see Table 5, page 16). As noted earlier, Argentina, Uruguay, Chile, and Cuba were special cases. The rates were already down to about 3 by 1950-55 in Argentina and Uruguay and also lower than average

Chances of Death by Age 2, by Mother's Education: Seven Latin American Countries, About 1970



Source: CELADE

pleted by closely spaced pregnancies, threatening the life chances of both mother and fetus. In Costa Rica and Peru, children born within a year of a sibling were five or six times more likely to die before age one than those born after a three- to four-year interval.

Infant mortality in Costa Rica has fallen to low levels in all income groups, largely because of government policies to expand medical services throughout the country and to provide safe drinking water. In the late 1960s infant mortality was four to five times higher among the "working classes" than among the "privileged classes," but a narrowing of this differential resulted in a dramatic fall in the country's infant mortality rate from 67 to 20 deaths per 1,000 births between 1970 and 1980. Costa Rica's experience may be difficult to repeat in countries with less homogeneous populations, but it highlights the necessity of improving living conditions and access to health care, including family planning, for low-income groups if infant mortality is to fall in the many Latin American countries where it is still high.

in Chile and Cuba, although Cuba's rate of 1960-65 showed an increase because of its postrevolutionary baby boom. After 1965 fertility decline spread to other countries. While there was little or no change in total fertility rates between 1950-55 and 1960-65, declines of over 25 percent occurred in a majority of countries between 1960-65 and 1980-85 (see last two columns of Table 5). The decline was greatest in Cuba—down by 58 percent—and Chile and Costa Rica—about 50 percent each—with Cuba reaching the lowest rate of Latin America in the early 1980s at 2 children per woman. Little change occurred in Argentina and Uruguay, which already had low fertility, and declines were also limited in Bolivia, Guatemala, Honduras, and Haiti. With the exception of Costa Rica, Mexico, and Panama, declines were more limited in Central America than in other parts of the region.

Determinants of fertility decline

While social and economic changes played a major role in Latin America's fertility decline, it is important to recognize that national fertility rates represent the sum of individual couples' reproductive behavior and that the rates are also influenced by biological and demographic factors. Marriage patterns (the average age at marriage and proportion of women who are married) and fertility control practices (contraception and abortion) are the most important of these "biological" factors, which demographers call the "proximate determinants" of fertility. It is through these variables that social and economic changes influence fertility rates; for example, the amount of education a woman has affects her age at marriage and use

Table 5. Total Fertility Rates in Selected Five-Year Intervals: 1950-1985

(Average number of lifetime births per woman at current age-specific fertility rates)

Subregion and country	1950-55	1960-65	1980-85	Percent change 1950-55 to 1960-65	Percent change 1960-65 to 1980-85
South America					
Argentina	3.2	3.1	3.4	-2.6	9.9
Bolivia	6.7	6.6	6.3	-1.8	-5.6
Brazil	6.2	6.2	3.8	0.0	-38.0
Chile	4.9	5.1	2.6	4.2	-49.4
Colombia	6.7	6.7	3.9	0.0	-41.5
Ecuador	6.9	6.9	5.0	0.0	-27.6
Paraguay	6.6	6.6	4.9	0.0	-26.6
Peru	6.9	6.9	5.0	0.0	-27.2
Uruguay	2.7	2.9	2.8	6.0	-4.3
Venezuela	6.5	6.5	4.1	0.0	-36.5
Mexico and Central America					
Costa Rica	6.7	6.9	3.5	3.4	-49.6
El Salvador	6.5	6.8	5.6	6.0	-18.9
Guatemala	7.1	6.8	6.1	-3.5	-10.5
Honduras	7.1	7.4	6.5	4.4	-11.7
Mexico	6.7	6.7	4.6	0.0	-31.6
Nicaragua	7.3	7.3	5.9	0.0	-19.0
Panama	5.7	5.9	3.5	4.3	-41.5
Caribbean					
Cuba	4.0	4.7	2.0	16.4	-57.7
Dominican Republic	7.5	7.3	4.2	-2.5	-42.9
Guyana	6.7	6.0	3.3	-9.6	-46.2
Haiti	6.2	6.2	5.7	0.0	-6.7
Jamaica	4.2	5.5	3.4	28.5	-38.0
Puerto Rico	5.0	4.4	2.6	-13.1	-41.3
Suriname	6.6	6.6	3.6	0.0	-45.4
Trinidad & Tobago	5.3	5.0	2.9	-5.8	-42.8

Source: UN, *World Population Estimates and Projections as Assessed in 1984*, medium variant.

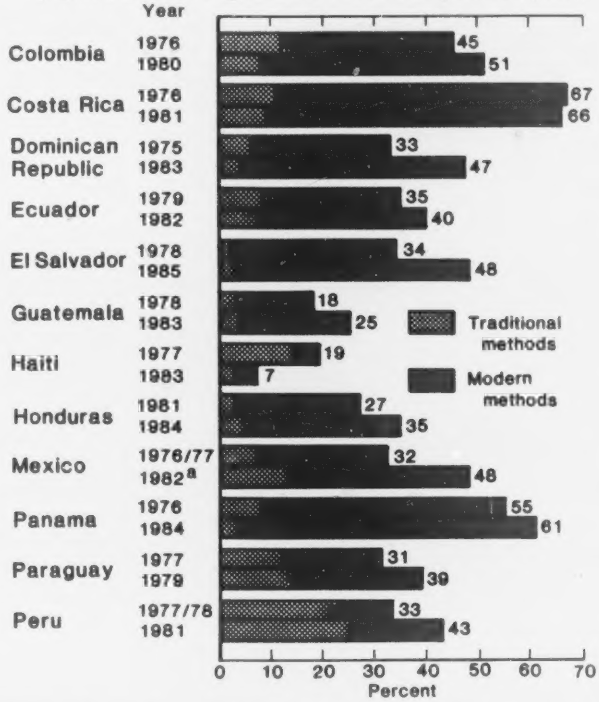
of contraception and these in turn affect how many children she has. As shown in Figure 2, contraceptive use has gone up significantly in most Latin American countries and this has been by far the most important of the proximate determinants in recent fertility declines (see Box 2, page 18).

A number of important changes brought about this increased contraceptive use. Contraceptive methods became much more available through family planning programs supported by governments and private agencies as well as through private doctors and commercial outlets. Social and economic progress increased couples' motivation to control fertility, either by spacing births or by having fewer children, usually a combination of both.

Even before national fertility rates began to fall, socioeconomic differences in fertility were marked in Latin America. Total fertility rates were two to three children higher in rural areas than in cities and fertility among the urban middle- and upper-income classes was often closer to that of Southern European countries than the high rates typical of developing countries. Educational attainment is perhaps the strongest socioeconomic variable associated with fertility differentials and women who had completed primary school had

Figure 2. Recent Trends in Contraceptive Use in 12 Latin American Countries

(Percent of women aged 15-44 in union using contraception)



Sources: Ecuador, 1982: Ministerio de Salud Publica, *Enquesta Nacional de Salud Materno y Infantil* (Quito: 1984); El Salvador, 1985: *1985 Demographic and Health Survey*, unpublished draft report; Honduras, 1984: *1984 Contraceptive Prevalence Survey*, unpublished draft report; Mexico, 1982: Francisco Alba and Joseph E. Potter, "Population and Development in Mexico," *Population and Development Review*, March 1986, p. 63; all others: Kathy A. London et al., *Fertility and Family Planning Surveys: An Update* (Baltimore: Population Information Program, Johns Hopkins University, 1985).

[a] Women aged 15-49 in union.

lower fertility than those with no education, while fertility was lowest among women with some secondary school or higher education.[9]

The rapid pace of social and economic change in the region since World War II has undoubtedly influenced reproductive attitudes and behavior. The growing proportion of population in urban areas, the growth of per capita income, and the improvement in women's status that has come with their increased education and labor force participation have all contributed. The changes are closely associated and many influence fertility in several ways. Women's increasing education is a good example. Better educated women are likely to know of more contraceptive methods and how to obtain them and be more open to the idea of controlling fertility. They are also more likely to work outside the home and earn more when they do and this increases their motivation to have fewer children for they give up more if they choose to devote themselves to childrearing. In Latin America, these "opportunity costs" of children are offset to some extent by the availability of servants to provide child care for middle- and upper-income working women.

Latin American women's educational attainment has gone up significantly in the last three decades. Women who were in primary school in 1960 reached their

Box 2. Proximate Determinants of Fertility Decline

Fertility rates reflect the sum of births to individual women in a population. To understand changes in rates over time, one must begin on this primary level. A baby enters the world as a result of the successful progression of a conception through pregnancy and birth. The occurrence of these events depends on biological, demographic, and socioeconomic factors, many of which vary between regions and over time. John Bongaarts of the Population Council has identified four primary variables that he named "proximate determinants" which explain most biological differences in fertility levels: age at marriage and proportions of women who are married, length of breastfeeding, abortion, and contraception. The contribution of each of these to levels and trends in fertility rates is measured by a set of indices ranging in value from 1 (signifying no effect) to nearly 0.

Censuses and surveys provide a consistent, through fragmentary, account of the proximate determinants of recent fertility declines in Latin America. Marriage patterns and length of breastfeeding have had little impact. Age at marriage and the prevalence of consensual or legal unions vary substantially by education and urban/rural residence. But these patterns have changed little since the 1960s, indicating that the fertility declines resulted more from decreases in the numbers of births within marriages or unions than from changes in the proportion of women living in union.

Prolonged breastfeeding of 15 to 20 months, common in Africa and Asia, can lengthen the time between births and ultimately lower overall fertility by extending the period of women's natural infertility after childbirth. But in most Latin American countries, according to survey data, the average duration of breastfeeding is less than ten months and may be declining, which is too short to have much effect on fertility rates.

The effect of abortion is difficult to estimate because, although known to be widespread, abortion is illegal in all Latin American countries except Cuba and therefore unrecorded. Since women do not give reliable responses on abortion in survey interviews, hospital records of women treated for complications of abortion are the only evidence of its frequency. Estimates of 1974 based on such records suggest a regional ratio of 300 abortions per 1,000 pregnancies. At this level abortion would lower fertility rates by 10 to 20 percent, according to the Bongaarts index.

Increases in contraceptive use and the shift from traditional to more effective modern methods like the pill and sterilization account for most of the fertility decline. Bon-

early childbearing years during the 1970s and more women were working in paying jobs (see "Work and Education," page 30). These and other changes affected the social and economic groups whose fertility had been highest and without whose participation the rapid fertility decline would not have occurred. The changes may not have boosted these groups' economic status, which historically has been one factor that encourages couples to have smaller families, because Latin America's persistent income inequality has scarcely improved. A plausible explanation for their shift to lower fertility was that the higher aspirations brought about by increased education and exposure to urban amenities were combined with economic pressures from inflation and income inequality and at the same time contraceptives became more available.

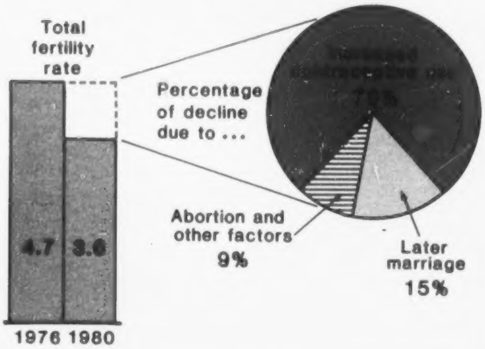
Continuation of the rapid fertility decline depends on several factors. One is the spread of lower fertility norms to rural areas, although rural people now make up much less of total country populations so that their fertility counts for less in average national fertility rates. Rural families remain large in many Latin American countries because of such institutions as land-tenure systems that give most people little chance of owning or passing on land to their children or which require a given number of family members in order to maintain control of gaarts' index of contraception, which measures the effectiveness as well as prevalence of contraception, shows values in the early 1980s ranging from 0.39 in Costa Rica to 0.54 in Colombia and 0.53 in Mexico. In Haiti, where only 7 percent of women in union were practicing family planning in 1983, the value in that year was 0.94.

Available data indicate that few Latin American women used modern contraceptives before 1965, but in most countries by the early 1980s, 40 to 60 percent of women aged 15-44 who were married or living in a consensual union were using some form of contraception (see Figure 2). The proportion of such women increased from 32 to 48 percent in Mexico between 1976 and 1982 and from 45 to 51 percent in Colombia between 1976 and 1980; in both countries use of modern methods went up 10 percentage points. Only Haiti showed a significant decline in contraceptive use, after 1977, and Bolivia and Guatemala still have rates under 30.

While use of all modern methods has gone up, Latin American women increasingly choose sterilization, indicating a concern for limiting family size as well as spacing births. The proportion of women aged 15-44 who had been sterilized rose from 4 to 11 percent in Colombia and from 12 to 27 percent in the Dominican Republic between the mid-1970s and the early 1980s. In many countries sterilization now rivals or exceeds the pill as the favored method.

Bongaarts indices measuring the decline in Colombia's total fertility rate from 4.7 to 3.6 births per woman between 1976 and 1980 highlight the importance of increased contraceptive use. As seen below, this accounted for 76 percent of the decline, while a trend toward later age at marriage or union contributed just 15 percent. The average length of breastfeeding, 8.9 months, changed very little. Lack of data makes an exact estimate of the effect of abortion impossible, but it accounts for a portion of the decline attributed to "other factors."

Contribution of Proximate Determinants to Fertility Decline in Colombia



the land that is alloted. Added to this is the higher economic value of children when they are needed to help with the work on family subsistence plots. A recent change that has helped reduce rural fertility is the shift from owner or tenant status to wage-paid work, for women as well as men, stemming from the consolidation of land for commercial agriculture.

The decline in national birth rates may slow in the 1980s as a result of age structure effects. Although total fertility per woman has dropped, the number of women in the prime childbearing ages is growing as the large cohorts born during the population surge of the late 1950s and early 1960s reach their mid-twenties.

Another uncertainty relates to income inequality. Many middle- and upper-income women rely on commercial outlets and private physicians for birth control, while lower-income women depend on government or privately supported clinics. As budget crises force cutbacks in spending on social projects, increases in these services may be jeopardized just when the need is greatest.

Too little is known about the incipient spread of fertility control to lower-income groups in Latin America to predict that the trend to lower fertility is permanent. It could be that the economic pressures of the past decade that have motivated more women to delay or terminate pregnancies will ease and that the desire for more children persists and will be realized when families can afford them. Not to be forgotten are the "baby booms" that occurred in the United States and a few other industrialized countries after many observers had concluded that fertility decline was irreversible once started.

Marriage and Family Structure

Marriage

The prevalence of consensual and casual unions in Latin America complicates the use of "marriage" as a measure of the extent to which women are exposed to the risk of pregnancy. Although average age at marriage is higher than in such Asian countries as Bangladesh and India where early marriage is the norm, this is not a reliable indicator of the age at which exposure to pregnancy and childbearing begins because of the variety of union types that exist, the way in which they are recorded, and the ages at which different types predominate. Consensual unions account for a significant proportion of unions in many Latin American countries and "visiting" unions are common in the Caribbean.

One way to measure early marriage is to examine the percentage of females aged 15-19 reported as married. International comparisons based on recent data show that the figure for Latin America, 17 percent, is far higher than the 2 percent reported for East Asia (China, Korea, etc.), but much lower than the 58 percent reported for South Asia (Bangladesh, India, Pakistan, etc.), 55 percent in Africa, and 34 percent in the Middle East. CELADE demographer Zulma Camisa found three basic "marriage" patterns in her review of census data from 1950 through 1970 for several Latin American countries.[10] Central American countries, except for Costa Rica and Panama, had the lowest average age at marriage and highest proportion of women of childbearing age in unions. Argentina, Chile, and Uruguay had later average ages at marriage and higher proportions of women who had never married, while Andean countries and Brazil showed intermediate patterns. Countries with the lowest age of entry into unions also had the highest proportion of consensual unions. Latin American nuptiality patterns fit neither the "European" model of relatively late marriage and a high proportion of women who never marry nor the typical non-European pattern of very early and nearly universal marriage.

From several censuses taken around 1950 and again around 1960, another CELADE demographer, Carmen Arretx, cites data showing increases in the proportion of women aged 20-45 reported as married, which suggests that marriage rates rose in the period immediately after World War II.[11] Some of the increases represented increased legal recognition of already existing unions; others resulted from less widowhood as mortality declined; and fewer women were reported as "single." The increased prevalence of marriage in the early postwar period has been cited as a contributing factor in the rise in the birth rates in many of the region's countries at that time.

Another reason for caution in using marriage prevalence as an indicator of exposure to the risk of conception is that pregnancy itself may be the reason for establishing or formalizing a union. The proportion of consensual unions is higher among younger women. Civil or religious formalization of unions may come after couples are already parents, when documentation is required for children's schooling and other purposes. The cost involved may explain group differences in formal marriage, with lower-income, less-educated, and rural couples being less able and less anxious to secure a marriage certificate. Non-formal unions are typical of Latin America's indigenous and African-heritage peoples, which may reflect not only cultural preferences but also lack of integration into the social and legal systems of their societies.

Cultural, social, and economic factors probably also play a role in the relation

Parents and children in northern Argentina.

between types of unions and family size. In contrast with the English-speaking Caribbean where women in legal unions appear to have higher fertility, studies of Latin American women have revealed higher fertility among women in consensual unions, possibly because these women are less effective in practicing contraception or because they view pregnancy as a way of stabilizing the relationship. The links between union type and fertility cannot be clearly identified because the relationship may run in either direction, both in actual practice and in whether and how unions and births are reported. Determining how divorce and separation affect fertility is also difficult because of incomplete statistics on informal separation of legally married couples, which is common and frequently underreported in situations where legal divorce is not recognized or difficult.

Family structure

Family composition is another dimension of the relation between union types and fertility. The nuclear family of just parents with their children has been found to be the most common residential type in Latin America, although relationships with extended family members not living in the same household are also important, as well as *compadrazgo* (described by one set of observers as an elaborate form of "godparenthood"[12]). Although it is widely believed that women living in extended families have higher fertility than those in nuclear families, this is not supported by empirical evidence from Latin America.[13]

While nuclear families are most common, not all of these consists of couples with their children. An important subgroup, and one that is overrepresented among the poor, consists of less stable family units, usually headed by women in informal unions or women who are single mothers—never married, separated, divorced, or widowed. Cultural biases in reporting of family headship has led to systematic underreporting of female headship.[14] One in five households in Latin America is estimated to have a woman as the de facto head, with primary responsibility for the support of dependent members. Women-headed households are particularly disadvantaged because usually they have lost or been abandoned by a working-age male, because the female head has to provide both income and home care for dependent children, and because basic institutional supports, such as credit and social services, are oriented toward "normal" family units with a male head or at least based on a formalized union. The legal structure of many Latin American countries recognizes women's rights and entitlements—even rights to their own children, in many instances—only for women who are or have been legally married.

Urban and Rural Populations

Latin America is by far the most urbanized of the world's developing re-

Box 3. Urban Primacy

Few Latin Americans lived in cities in the early 1900s when export of primary products like coffee and wheat was the backbone of most country economies. But those who did tended to concentrate in single large cities, typically a country's capital or main seaport. Concern about this "urban primacy" stemmed from the resulting centralization of political and economic power in these centers, usually to the detriment of development in other parts of the country. With the region's post-World War II population surge there were added concerns that migration would lead to further concentration in primate cities, exacerbating the difficulties of providing jobs and urban services. Often cited as an extreme example of urban concentration is Mexico City, with an estimated 1985 metropolitan population of 17 million—six times that of Mexico's second largest city, Guadalajara—and projected to grow to 26 million by 2000.

Urban concentration in Mexico is actually less than in some other Latin American countries. A simple measure of urban primacy is the ratio of the population in a country's largest city to the combined population of the three next ranking cities. These ratios were high in several Latin American countries before World War II, as seen in the table, which also shows ratios for the United States.

Postwar industrialization did not invariably increase the ratios. University of Texas demographer Harley Browning found that although primate city populations grew between 1940 and 1960, the primacy ratio was stable or declined in Brazil and Colombia, went up a little in Mexico, and rose more in Chile, Peru, and Venezuela. In the first three countries, industrial expansion took place in cities other than the capital—Sao Paulo, Medillin, and Monterrey. In Brazil a bipolar primacy pattern, combining Rio de Janeiro and Sao Paulo, emerged even before World War II. Sao Paulo overtook Rio as Brazil's largest city after 1960 and is projected to be the world's second largest city, after Mexico City, by 2000.

Browning predicted further declines in primacy as industrialization continued for three reasons. First, sheer size eventually slows large-city growth; because of space limitations it takes a city of 10 million longer to double its population than one of 5 million, and potential migrants from rural areas dwindle as rural populations stabilize or decline. Second are the diseconomies of large scale. The marginal costs of providing adequate city transportation, communication, water, and other services become proportionately greater with the distances involved as well as increased land values. Third, as industrial development passes from import substitution to development of internal markets, companies may be inclined to locate factories closer to regional markets and sources of raw materials. Although difficult to control directly, population concentration can be tackled indirectly through policies and programs that affect employment and investment opportunities.

From 1960 to 1980 the primacy ratio remained fairly stable in Brazil, Colombia, and Venezuela, increased in Chile and Mexico, and declined in Peru. It remains to be seen whether Mexico City's disastrous 1985 earthquake, added to its already severe air pollution and water shortages, will spur decentralization in Mexico.

Urban Primacy in Six Latin American Countries and the United States

(Ratio of population in largest city to that of three next ranking cities)

Country	Pre-1940	About 1960	About 1980
Brazil	1.0	0.8	0.9
Chile	1.8	2.5	2.8
Colombia	0.8	0.8	0.9
Mexico	2.4	2.6	2.8
Peru	4.2	5.0	4.2
Venezuela	1.2	1.6	1.5
United States	0.8	0.6	0.7

Sources: Harley L. Browning, Robert W. Fox, United Nations, U.S. Bureau of the Census.

gions. In the mid-1980s, some 67 percent of its population resides in localities officially classified as urban.[15] This contrasts with 30 percent in Africa and 24 percent in South Asia (Bangladesh, India, Nepal, and Pakistan) and is close to the 73 percent for Europe and 74 percent for North America. Since 1950 Latin

Table 6. Growth of Urban Population: 1930-1980

	Population in cities of 20,000 or more				Percent of total population in nationally defined urban areas 1980
	Percent of total population			Average annual growth (percent) 1950-80	
Subregion and country	1930	1950	1980		
Total, of 20 countries in table	17	26	47	4.8	65
South America					
Argentina	38	52	70	2.6	83
Bolivia	14	20	35	4.3	45
Brazil	14	21	52	5.7	67
Chile	32	45	67	3.3	80
Colombia	10	22	54	5.7	66
Ecuador	14	18	40	5.7	47
Paraguay	11	19	28	4.1	39
Peru	11	20	49	5.7	64
Uruguay	35	56	67	1.5	84
Venezuela	14	35	67	5.8	76
Mexico and Central America					
Costa Rica	20	17	30	5.3	45
El Salvador	7	14	25	4.9	44
Guatemala	11	13	19	4.1	37
Honduras	—	7	25	7.5	36
Mexico	14	26	49	5.2	65
Nicaragua	14	14	37	6.2	54
Panama	27	28	43	4.3	49
Caribbean					
Cuba	26	33	49	2.9	67
Dominican Republic	7	12	42	7.1	51
Haiti	4	6	16	5.5	23

Sources: 1930: UN, *Growth of the World's Urban and Rural Population, 1920-2000* (New York: 1969); 1950-80: CELADE, Latin American Population Information Programme (INFOPAL), Data Files, 1986.

America's urban population has grown by an average 4.7 percent a year, compared to an average of about 1 percent for the rural population. Rural population in several countries has recently declined in absolute numbers as well as proportionately. This has accentuated already large differences between the region's urban population growth rates and overall population growth rates.

Latin America has inherited a strong urban tradition from its past. During the colonial era, highland centers—many built on the sites of pre-Columbian cities—were focal points of Spanish political control and exploitation of indigenous populations, while coastal cities functioned as ports and administrative centers for both Spanish and Portuguese colonial traders. With the export boom during the 19th century, these cities grew in size and wealth and several—like Mexico City, Rio de Janeiro, Santiago, and Lima—became "primate" cities, commanding disproportionate shares of their country's urban population and amenities (see Box 3).

Despite this city growth, the region was still predominanty rural before World War II; the dramatic shifts in rural-urban population balances have come since the war. Tracking these shifts using country definitions of urban areas can be misleading, because some of the definitions are based on administrative criteria and others on varying population-size thresholds. To achieve comparability, Table 6 presents data compiled by CELADE on urban population defined as the population living in localities of 20,000 and more inhabitants. This is more restrictive than official definitions of most countries in the region.

According to this definition, 17 percent of Latin America's population was urban in 1930, 26 percent in 1950, and 47 percent, or 166 million of a total of 351 million, in 1980. This 1980 figure is more than a third lower than the 65 percent reported for 1980 in official figures (see last column of the table), which classified 229 million people as urban in the 20 countries shown in Table 6. In 1930 only Argentina, Chile, and Uruguay had more than 30 percent of their population in urban areas of 20,000 or more people. By 1980 the figure was over 40 percent for 12 of the 20 countries shown in Table 6. Growth rates for these urban populations exceeded 5 percent a year between 1950 and 1980 in more than half the countries, with the Dominican Republic and Honduras leading at over 7 percent. The annual growth rates were less than 4 percent only for Argentina, Chile, Uruguay, and Cuba, where the proportion of population living in localities of 20,000 or more was already relatively high in 1950.

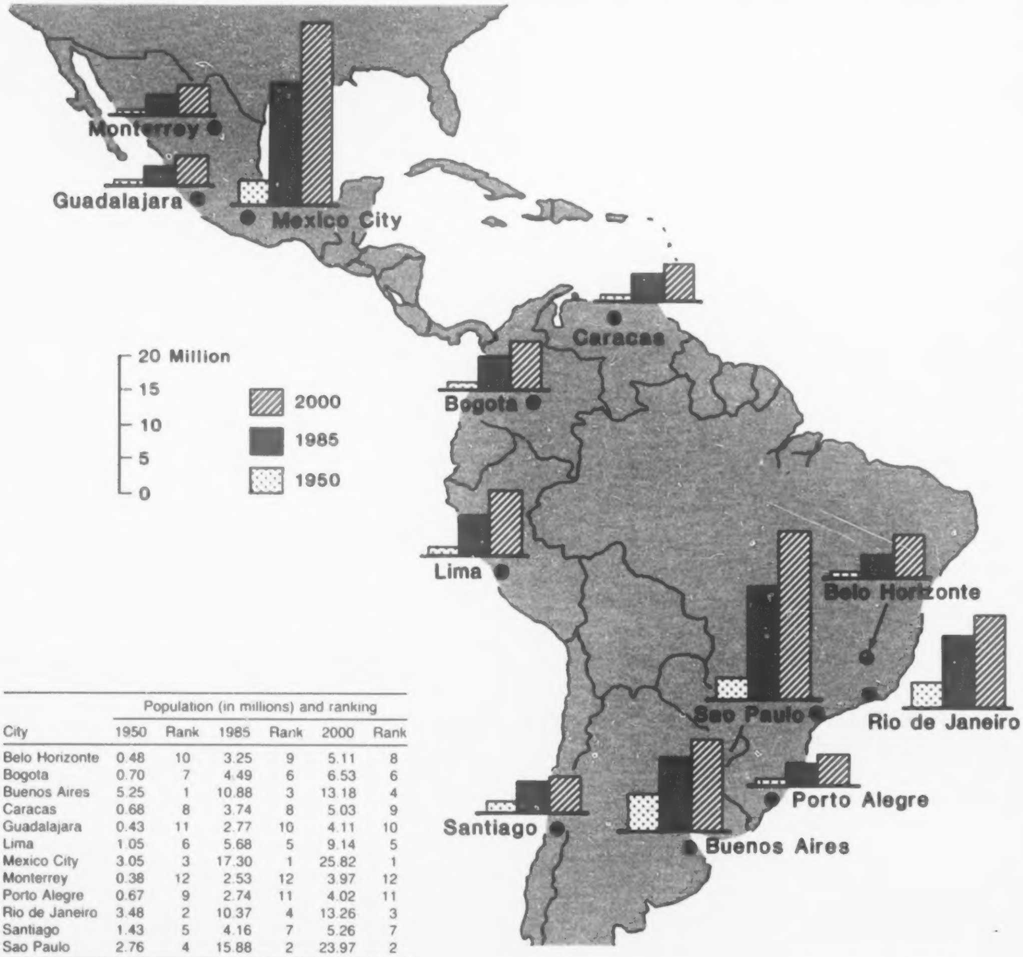
Problems stemming from rapid urban growth—unemployment, urban poverty, slum housing, strains on urban services, and the political unrest these can generate—are among the most pressing issues that the region faces in the last quarter of this century. There is strong consensus that the problems are aggravated by the extreme concentration of population and wealth in a few large cities. Megacities often drain resources from smaller cities and rural areas where investments might be more effective in raising living standards. Located in the region are Mexico City and Sao Paulo, currently the first and third largest of the world's metropolises, with estimated 1985 metropolitan populations of 17 and 16 million, and projected to grow to 26 and 24 million by the year 2000. Buenos Aires and Rio de Janeiro are also ranked in the world's ten or eleven largest metropolises in both 1985 and 2000 and Lima, Bogota, Santiago, and Caracas are not far behind, as shown in Figure 3. Even the secondary cities shown in Figure 3—Guadalajara and Monterrey in Mexico and Belo Horizonte and Porte Alegre in Brazil—are projected to have 4 million or more inhabitants in 2000.

Fueling the postwar urban population surge were both the region's high overall population growth and the restructuring of economies from export-oriented agriculture to more regionally oriented industrialization. On the demographic side, both natural increase and internal migration played a role. United Nations estimates for nine countries in the region attribute an average of 64 percent of urban growth during the 1950s and 1960s to natural increase (births minus deaths) and 36 percent to rural-urban migration and reclassification of localities.[16] In Europe during the same time, natural increase accounted for only a third of urban growth, a difference that reflects Latin America's high rate of total population increase.

Internal migration

Massive internal migration has been a conspicuous feature of the region's postwar scene. Rural-to-urban shifts have dominated the flows but intercity movements, migrants returning from metropolises to small towns and rural areas, and settlement of agricultural frontier areas have also reshaped population distribution patterns. Like their counterparts elsewhere, policymakers and researchers concerned with these flows and their relation to socioeconomic changes have focused on a variety of questions: Who moves, why, where, and how far; what is the impact on the places left behind and on the new locations; and what policies can best deal with the problems created by large-scale population movements.

Figure 3. Growth of Latin America's 12 Largest Cities: 1950-2000



City	Population (in millions) and ranking					
	1950	Rank	1985	Rank	2000	Rank
Belo Horizonte	0.48	10	3.25	9	5.11	8
Bogota	0.70	7	4.49	6	6.53	6
Buenos Aires	5.25	1	10.88	3	13.18	4
Caracas	0.68	8	3.74	8	5.03	9
Guadalajara	0.43	11	2.77	10	4.11	10
Lima	1.05	6	5.68	5	9.14	5
Mexico City	3.05	3	17.30	1	25.82	1
Monterrey	0.38	12	2.53	12	3.97	12
Porto Alegre	0.67	9	2.74	11	4.02	11
Rio de Janeiro	3.48	2	10.37	4	13.26	3
Santiago	1.43	5	4.16	7	5.26	7
Sao Paulo	2.76	4	15.88	2	23.97	2

Source: Estimates and projections of population in agglomerations (metropolitan areas) based on UN assessments prepared in 1984, medium variant, to be published.

Reasons for migration

Individuals move. Their motives are important for understanding why migration occurs, but societal forces are equally if not more important because they shape the contexts in which migration decisions are made. The migrant's family and household situations also need to be kept in focus, since these relationships may hinder or foster a move and decisions are often swayed by the actions of others closest to the individual. A move may be motivated by marriage, for example, or the desire to join family members who moved earlier. However, economic considerations usually carry most weight and these are largely determined by broad social forces.

A basic explanation for the rural exodus in Latin America is that economic opportunities have not kept pace with population increase as entrenched economic and social institutions have limited the capacity of rural areas to absorb additional population. Foremost among

Harvesting carrots on a family plot in Colombia. The rural exodus has been spurred by population pressures on the small amounts of land held by the mass of rural households.

these is the extreme inequality of land tenure. From colonial times through this century, most of the region's land and agricultural resources, such as credit and new technology, has been controlled by a small minority of large landowners, leaving the rural masses to work with small subsistence plots, *minifundia,* or as landless laborers on large estates. Despite efforts at land reform, consolidation of large holdings has continued or increased in many countries during the postwar period.

Rising rates of natural increase aggravated the stress created by land inequality. Rural Latin America did not have the social system that historically enabled peasant populations of Europe to balance population and productive resources—a system that required a man to remain unmarried until he could provide a living for a family and that land be passed on intact to the eldest son. Instead, the postwar population increase accelerated the fragmentation of smallholdings. Migration played an important role in the struggle to maintain living standards as one or more family members could relocate to find a paying job.

Also spurring the rural exodus was the urban bias of postwar industrialization strategies adopted by many countries. Investments in productive and social infrastructure were concentrated in urban centers, often the capital or major metropolis. Policies to hold down food prices to appease potentially volatile urban masses and channel available credit to industries have shortchanged the rural economy. The few incentives that did reach the rural sector favored large landowners and commercial producers. This further shrank income-earning possibilities for food-producing *campesino* households at the same time that their members were increasing.

On the other side of the coin is the growing lure of the city, which holds out the promise not only of jobs and other ways to earn income, but also health services and schools to which impoverished rural dwellers rarely have access. Cheaper transport and wider communication networks also figured in campesinos' assessments of whether they could better their lot by moving to the city.

Also driving the flight from the land have been manmade calamities and natural disasters to which Latin America is prone: violent struggles over land, civil war in El Salvador, Guatemala, and Nicaragua, soil erosion, hurricanes, floods, frosts, and the droughts that periodically ravage northeastern Brazil and southern Peru. These have often provided the final impetus for a move to rural dwellers, whose resilience has been weakened by long-standing adversities and population pressures.

Migration patterns

The stereotypical image of migrants in the developing world is of the rural peasant arriving at the bus station of the nation's largest city with all of his or her worldly goods in a bag. Net rural-to-urban migration has indeed had the greatest impact on redistribution of Latin America's population, but the summary statistics hide a complex pattern of individual moves.

Studies of migration to the region's largest cities show that most moves from rural areas are directed to towns and smaller cities and that moves to larger cities tend to come from smaller cities and towns rather than directly from rural areas. This is not always true, however. While nearly 70 percent of migrants to Brazil's metropolitan areas came from urban places, rural migrants predominated in flows to Mexico City and Monterrey, Mexico. The largest share of total migration originates from regions close to the destination. Migrants recently arrived in cities are most likely to have traveled a relatively short distance and come from rural areas; those who have been there longer have usually come over long distances from other urban areas.[17]

All studies of migration face the problem that they can identify only the movers who are present at a particular place (the most recent destination) and time and miss those who came earlier and left. They also may exaggerate the amount of migration to a particular destination by not taking account of migrants who will move on or return to their origins. Return and temporary migration is statistically elusive but is important in the survival strategies of large numbers of individuals and families in Latin American countries.

Movements to rural areas have also featured in the region's postwar internal migration patterns. Most of these migrants have come from other rural areas, but some come from overcrowded, economically depressed towns and small cities. These flows have generally been linked with schemes to colonize agriculture frontiers, most recently the Amazon Basin frontiers of Brazil, Colombia, Peru, and Venezuela. Others have been generated by irrigation and road-building projects, such as the Trans-Amazon Highway in Brazil, and settlement of the rural hinterlands of such new cities as Brasilia and Ciudad Guyana. There was once much hope that Latin America's vast unsettled areas like the Amazon region would be a relief valve for some of the population pressures of the coastal regions, but this hope has been largely frustrated by the costs of relocation of large numbers of people and by the sometimes even greater concentration of landholdings on the frontier.

Migrants' characteristics

Latin American migrants, like migrants historically, are most likely to be young adults, aged from the mid-teens to the mid-thirties. The majority of migrants to cities are unmarried, while migrants to rural areas are most likely to move as a family. Females generally outnumber males among migrants in cities, attracted by their better chances for employment as domestic servants in particular, but also as office workers, sales clerks, and teachers. However, the gender balance varies with the destination. In Brazil, service-oriented Rio de Janeiro has drawn more females than males, but males have outnumbered females among migrants to industrial Sao Paulo. Males have outnumbered females during the early stages of frontier migration, but the gender balance shifted when family members arrived later.

Latin Americans who choose to migrate are better educated and more highly skilled, on average, than those who stay behind. Similarly, "pioneer" movers are better equipped for a new life than those who follow later. For migrants' "sending areas," the drain of their younger, better educated and more skilled workers may depress the local economies and this prompts the further exodus of individuals who want to get ahead. It also increases the dependency ratio of these communities, with fewer inhabitants of working age left to support the children and older people who do not migrate. But with the departure of young

Box 4. Shantytowns and Abandoned Children

The migrants flooding into Latin American cities face severe shortages of housing as well as jobs. Out of this great demand has evolved an urban phenomenon seen throughout the Third World and on the outskirts of every major Latin American city: the "shantytown." Here, cut off from the city's economic mainstream and many of its services, the urban poor live in makeshift shelters of cardboard, wood scraps, corrugated plastic, even mud. Nearly half (46 percent) of Mexico City's population lived in shantytowns or other slums in 1970, according to the World Bank; in Caracas, Venezuela, the proportion was 42 percent, and in Bogota, Colombia, 60 percent. The urban poor have been particularly hard hit by Latin America's economic crisis of the 1980s, so the figures could now well be higher.

The legal status of shantytowns, situated on vacant government or private land, is often ambiguous. Enterprising landlords "sell" or rent space but residents seldom gain clear title and can be evicted at any time. In Lima, Peru, shantytowns were erected literally overnight by squatters to legitimize their claims to the land, earning them the nickname *callampas,* or mushrooms. In Sao Paulo an estimated 1 million residents are "squatters" living in over 1,200 quasi-legal shantytowns. The total number of the poor in Sao Paulo is many times higher.

To protect themselves, residents of many shantytowns have banded together to elect mayors and other officials to represent their rights, however tenuous, and have become a political force recognized by local politicians as a potential source of support. But this has not stopped the occasional bulldozing of shantytowns under pressure from opposing groups or as part of "urban renewal." Many of Rio de Janeiro's cliff-hanging slums, *favelas,* were torn down in the name of urban renewal in the late 1960s and residents relocated to the outer edges of the metropolitan area, far from their jobs in the city.

Rio's *favelas* and other hillside shantytowns are also vulnerable to landslides; other shantytowns are prey to floods. Over 700,000 shantytown dwellers in Guayaquil, Ecuador's port city, live in a floodplain with no sanitation, schools, or health facilities, many of them in reed huts perched on stakes over water. Soot from nearby heavy industry blackens the air in the shantytown district of Cubatao on Sao Paulo's outskirts; rates of miscarriage, birth defects, and infant mortlity are several times the national average.

Shantytowns do not necessarily house the poorest of urban poor or most recently arrived migrants. In Lima, as in many other cities, migrants usually settle first in central-city slums, then learn that better housing can be found in less crowded shantytowns at the periphery of the city. The lucky, or more am-

adult women there may be a compensating demographic effect of fewer newborns added to the population. It has also been speculated that outmigration reduces the chances of political reforms, since individuals with frustrated ambitions have left rather than stay to work for such changes.

In the places to which they relocate, migrants tend to be less educated and less skilled, on average, than natives—a gap that widens as migration dips deeper into the skills and educational pools of sending areas. Despite this apparent disadvantage, however, research suggests that postwar migrants in Latin America's cities have done at least as well as city natives, socially and economically, and have not—as once expected—degenerated into an alienated, politically explosive mass of urban "marginals." From a review of 40 studies of migrant assimilation in Latin America, University of California sociologist Wayne Cornelius concluded that urban migration "did not necessarily result in severe frustration of expectations for socioeconomic improvement or widespread personal and social disorganization."[18]

Urban strains

Although individual migrants may indeed

Shantytown huts perched on stakes over water in Guayaquil, Ecuador.

bitious, move on, many dreaming of owning their own house. The dreams are often shattered when the shacks for which they have paid dearly are lost as a result of bad weather, vandalism, or legal action.

Wretched living conditions and endemic unemployment prompt some shantytown and slum dwellers to give up and return to the countryside or move to another city. Others give vent to their frustrations in strikes and demonstrations. One visible sign of stress in all large American cities are the "abandoned children," apparently homeless and roaming the streets—begging, stealing, and sometimes forming criminal gangs. They are the sons and daughters of families disintegrated by the recurring cycle of unemployment and underemployment. Some have been infants left at police stations, churches, or in the streets by desperate mothers. Others have simply run away from the extreme poverty of their rural or slum families. Estimates of the total number of abandoned children in Latin America vary wildly, but all are in the millions.

The children are considered "beyond rehabilitation" by many; governments cannot cope. Only 50,000 of an estimated 2.5 million abandoned children in Sao Paulo received any help from government agencies, according to a Brazilian television report of the early 1980s. A government report of 1982 stated that half of Rio de Janeiro's *favela* children, more than a million, could not get into schools and dropout rates were "astronomical" for those who did. Many of these will end up "on the street." Not surprisingly, a recent study of Sao Paulo prisons found that 80 percent of inmates were former street children. The existence of abandoned children is a disturbing portent for Latin America's future, not only because these children carry into their adult lives the often criminal survival tactics learned in the streets but also because they represent only the forefront of future waves of abandoned children if economic and social conditions are not improved.

find in cities the easier access to schooling for their children and health services that attracts many of them, the net effect of their moves means added pressures on limited city services. The complex infrastructure of housing, water, sanitation, streets, public transport systems, as well as schools and health facilities that city life demands cannot easily or quickly be scaled up as populations double and redouble.

Migration, however, has contributed only partly to city problems. It is true that migration has escalated the demand for housing that has fed the proliferation of squalid shantytowns that ring all large Latin American cities (see Box 4). Yet, studies of shantytowns reveal that migrant status is only one of a number of social, economic, and demographic characteristics distinguishing who lives in them. A particular problem for administrators of Latin American cities is that tax bases are limited when most workers may not hold formal jobs and up to half the population may live in unregulated shantytowns, so revenues cannot keep up with the demand for services.

With rapid overall population growth, the social and economic problems associated with cityward migration are generally issues that a society would have to confront regardless of whether migration occurred. What migration does is concentrate the strain on services and other problems in large cities and thus makes them more visible. Of course, it may also ease these pressures to the extent that economies of scale can be realized, but there comes a point when cities have grown so large that more population increases rather than reduces the costs and difficulty of providing services.

Work and Education

Employment shifts

Postwar urbanization was accompanied by dramatic shifts in the structure of Latin America's work force. In 1950 more than half the labor force was engaged in agriculture in all but five countries of the region—Argentina, Chile, Uruguay, Venezuela, and Cuba—and close to two-thirds or more in Ecuador, several Central American countries, and in the Dominican Republic and Haiti in the Caribbean (see Table 7). By 1980 agriculture accounted for more than half the work force only in Guatemala, Honduras, and Haiti.

Though import-substituting industrialization was one of the forces contributing to rapid urban growth and the shift out of agriculture, declines in the share of the labor force in agriculture were generally not matched by proportional increases in employment in manufacturing and other industries. In Brazil, for example, employment in agriculture dropped by 29 percentage points between 1950 and 1980, from 60 to 31 percent of the total, but the share of workers in industry rose only 10 points, from 17 to 27 percent. The demand that drove the region's post-World War II expansion in manufacturing was concentrated in consumer durable goods like television and refrigerators and in transportation equipment, petrochemicals, and other products that required complex and capital-intensive technologies rather than labor in order to be competitive with imports from industrial economies outside the region.

Job-seekers sought employment elsewhere, particularly in construction and services. Many of these jobs were generated in the urban "informal" sector, which ranges from street vendors, errand runners, and odd-job handymen to small-scale construction and repair shops, all operating without the institutional umbrella of wage contracts, tax payments, and bank credit of the formal sector. The informal sector plays a crucial role in absorbing the growing masses of job-hunters in urban Latin America, both migrants and natives arrived at working ages. Before the recession and debt crisis of the early 1980s slashed employment in formal industries, many countries in the region, thanks to informal employment, could report measured "unemployment" figures as low as 2 or 3 percent.

At issue here is whether informal employment is really disguised unemployment or underemployment. Productivity and earnings are clearly lower in the informal sector. On the positive side, having the informal sector available to absorb labor has enabled the formal sector to adopt more advanced technologies. The negative side of this is the wage gap between the two sectors, which has made measured income inequality in urban areas much worse and increased the economic pressures on low-income workers.

In the case of services, productivity is difficult to measure because workers' earnings provide the main basis for determining the service share of a country's gross national product. The earnings capacity of service workers is hampered by low skills, lack of access to credit, and policies that have been detrimental to artisan workers. Excessive reliance on government employment has been another troublesome aspect of the expansion of services, particularly in primate cities. Increases in the numbers of teachers, public health officials, and other urban service workers have con-

Table 7. Percent of Labor Force in Agriculture, Industry, and Services: 1950 and 1980

Subregion and country	1950			1980		
	Agriculture	Industry	Services	Agriculture	Industry	Services
South America						
Argentina	25	32	43	13	34	53
Bolivia	61	20	19	46	20	34
Brazil	60	17	24	31	27	42
Chile	34	30	36	16	25	58
Colombia	57	18	25	34	24	42
Ecuador	65	15	19	39	20	42
Paraguay	56	20	25	49	21	31
Peru	58	18	24	40	18	42
Uruguay	24	28	48	16	29	55
Venezuela	43	21	36	16	28	56
Mexico and Central America						
Costa Rica	58	17	26	31	23	46
El Salvador	65	15	19	43	19	37
Guatemala	68	14	18	57	17	26
Honduras	72	9	19	61	16	23
Mexico	60	17	23	37	29	34
Nicaragua	68	15	17	47	16	38
Panama	56	14	30	32	18	50
Caribbean						
Cuba	43	21	37	24	29	48
Dominican Republic	73	11	16	46	15	39
Guyana	44	26	30	27	26	47
Haiti	86	6	9	70	8	22
Jamaica	47	23	30	31	16	52
Puerto Rico	37	27	36	4	30	66
Suriname	35	21	45	20	20	60
Trinidad & Tobago	25	33	42	10	39	51

Source: International Labour Office (ILO), *Economically Active Population 1950-2025, Volume III, Latin America* (Geneva: 1986).

Note: The labor force includes all persons who are working or looking for work.

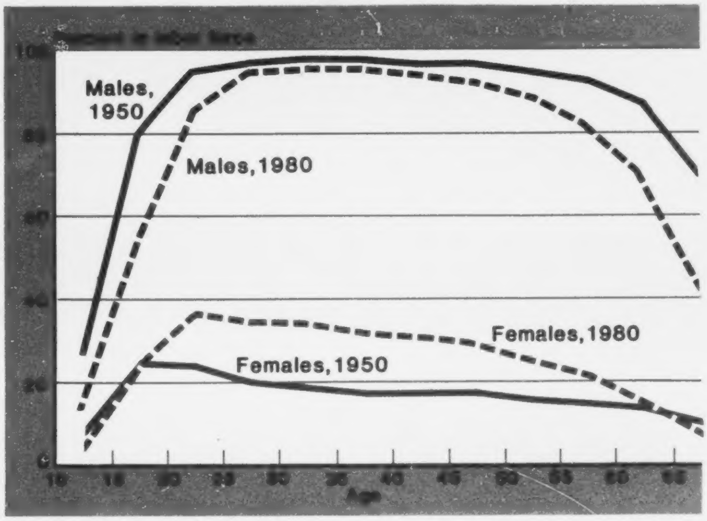
tributed to the increased demands for such workers by growing urban populations. However, they have also meant the strain of large payrolls on government budgets, concentration of these services in a few large centers, and the bureaucratic inefficiencies and potential for corruption that ensue when the government becomes the employer of last resort.

Urbanization, industrialization, and the surge in service jobs have also changed men and women's labor force participation rates and lifetime work patterns. According to an important study by labor force expert John Durand, Latin American men traditionally entered the work force at a young age, often as early as ages 10 or 11, and left at a comparatively late age, with participation rates close to 100 percent between ages 20 and 60.[19] This can be seen in the profile of men's age-specific labor force participation rates in the region in 1950 shown in Figure 4 (page 32). With urbanization, delayed entry into the work force because of increased school attendance, and earlier departure as formal retirement has become more prevalent, men's participation rates have declined, as seen in the lifetime work profile for men in 1980 illustrated in Figure 4.

Figure 4 shows that the opposite has been true for Latin American women,

Figure 4. Male and Female Labor Force Participation Rates, by Age: 1950 and 1980

(Percent working or looking for work)



Source: ILO, *Economically Active Population 1950-2025.*

whose labor force participation patterns are also more difficult to document because of inconsistencies and underreporting of women's work in census data. Citing data for around 1960, Durand pointed out that the overall labor force participation rate for women in Latin America is higher than that reported in North Africa, but lower generally than in most other developing as well as developed regions. This was still true in 1980, according to data compiled by the International Labour Office, when the overall rate for women in Latin America was 18 percent, compared to 8 percent for women in North Africa, 22 percent in South Asia, a high 40 percent in East Africa, and 39 percent in North America and 38 percent in Northern Europe.[20] This disparity reflects the low labor force participation rates reported for women in Latin America's agricultural sector, which even more than in some other developing regions overlook women's unpaid farm work. In the data cited by Durand, less than 15 percent of women were reported as working in agriculture in all Latin American countries except Bolivia. The age pattern of women's labor force participation in both 1950 and 1980 contrasts with patterns for men shown in Figure 4, with the highest rates reported for younger women and lower ones at older ages.

Outside of agriculture, Durand reports, women's labor force participation rates are generally higher in Latin America than in other developing regions. This appears to be a reversal of an earlier pattern. Data for Argentina and Brazil show that women's labor force participation declined during the initial stages of industrialization as factory production replaced home-based crafts production, reducing women's opportunities to combine income-generating activities with childrearing. Women's labor force activity rates have risen along with the increasing proportion of service workers in total employment figures. The rates have gone up most for single women aged 20-29—the women who have figured prominently in postwar migration from the countryside to cities, where many find work as domestic servants. Cultural patterns have played a role: generally permissive attitudes about migration of unmarried women and the high incidence of consensual unions that offer little security for the women in them. Employment rates for women in formal unions have been lower, but they too have gone up recently, although the proportions of legally married women working or looking for work outside the home are still far lower in Latin America than in Europe and North America.

Age patterns and types of women's employment have also been influenced by increased educational attainment. Increased school attendance has delayed women's entry into the work force, though not so markedly as with men (see Figure 4). It has also contributed to higher earnings and occupational differentials among working women, with those who attend school longer entering the labor force later and moving up the income and occupational scales more rapidly than women who began work at earlier ages with less education.

Educational attainment

It is clear that both males and females have made remarkable educational gains in the postwar period, though country differences remain and again the available data need to be interpreted with caution because of different country reporting practices. As a measure of educational attainment, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) reports recent data—usually from the mid-1970s to the early 1980s—on the proportions of adults aged 25 and over with no schooling. These range from a high of 94 percent in Guatemala in 1973 to lows of 6 percent in Argentina in 1980 and 4 percent in Cuba in 1981, with the percentages generally higher in the Caribbean (except for Cuba) and in Central America (except for Costa Rica and Panama), and lower in South American countries.[21]

Another measure of education is the age-specific school enrollment ratio—the percentage of males and females enrolled in school among all those in the usual ages for the different levels of education: ages 6-11 for primary school, 12-17 for secondary school, and 18-23 for higher education. In 1960, the first year for which UNESCO reports overall averages for the region, the enrollment rate for boys and girls aged 6-11 was 58 percent; for 1985 UNESCO puts it at 84 percent. At the same time, the enrollment rate for the population aged 12-17 increased from 36 to 71 percent.[22]

A Brazilian schoolgirl. The marked educational gains of both men and women along with women's increased labor force participation have had much to do with the fertility declines since the 1960s.

Gender differences in enrollment rates are minimal in Latin America, unlike other developing regions where girls' enrollment rates in 1985 still averaged about 80 percent of the rates for boys at ages 6-11 and 70 percent at ages 12-17. In Latin America, girls trailed boys by only one percentage point at ages 6-11 in both 1960 and 1985. At ages 12-17, a five-percentage-point gap in 1960 (39 percent for boys versus 34 percent for girls) had also narrowed to just one percentage point by 1985 (71 percent versus 70 percent). Even at ages 18-23, when many reported students are probably attending university, the marked male advantage in 1960 (7 percent versus 4 percent for females) had nearly vanished by 1985 (26 percent versus 23 percent).

Educational attainment and labor force participation are highly correlated and the increases in both have contributed to changes in the roles of women in Latin America. They have had much to do with the fertility declines since the late 1960s and are also related to a variety of other important social and economic changes at the individual family and household level, including migration and improved health and nutrition. It would not be an exaggeration to say that increased education of both males and females is one of the major forces behind the often dramatic shifts in Latin American demographic patterns since World War II.

International Migration

Before 1930 international migration flows to Latin America consisted mainly of trans-Atlantic movements to Argentina, Brazil, Uruguay, and—to a lesser extent—Chile and Cuba. Most immigrants came from Spain, Portugal, and Italy, although there were also some from Eastern Europe and Asia. Immigration to the region slowed during the Depression of the 1930s, when many countries restricted entries on the grounds that immigrants were competing with natives for scarce jobs. The influx resumed after World War II, with Venezuela then becoming the principal destination for immigrants of European origin.

Immigration from countries outside the hemisphere has continued since the 1950s but at substantially lower levels. Meanwhile, two new international migration patterns have taken on economic, political, and demographic significance. One is the emigration of well-educated, highly skilled workers to industrialized countries outside the region, particularly the United States, and from less to more developed countries within Latin America. Although the numbers are limited, this "brain drain" has drawn much attention from researchers and policymakers because it means a loss of human capital for sending countries. It is also fairly well documented, because most such migration is legal and officially recorded.

The same cannot be said for the second major international current to emerge since the 1950s—the massive transfer of unskilled and semi-skilled workers, joined in the late 1970s and 1980s by refugees fleeing civil strife in El Salvador, Nicaragua, and Guatemala. A large part of this migration is illegal and therefore undocumented. It also involves temporary and seasonal moves, which further complicates efforts to measure flows. It is widely recognized that the flows are grossly underestimated in conventional data, such as transit records and the numbers of foreign-born persons tallied in country censuses.

Venezuela, Argentina, and the United States have been the main destinations for both legal and undocumented Latin American migrants crossing national boundaries. Also important are migrant and refugee streams among Central American countries, particularly from Nicaragua and El Salvador into Costa Rica and Guatemala, from Central America into Mexico, and between Caribbean countries. Net flows for Central America, Mexico, and the Caribbean underestimate the total volume of migration, since these areas are both sources of major flows and destinations for subregional moves.

Although legal immigration into Venezuela was sharply restricted between 1958 and 1973, undocumented immigration increased steadily. Demographer Saskia Sassen-Koob estimates total entries during the 1960s at a million, although the net accumulated immigration by the early 1970s was closer to half a million, suggesting that many of the migrants were seasonal or temporary workers.[23] Venezuela has attracted most of the undocumented migrants leaving its neighbor Colombia, though many such Colombians have gone to the United States, Ecuador, and Panama. Venezuela relaxed immigration restrictions in 1973 in an effort to regulate entries and as its economy boomed with the OPEC-engineered hike in world oil prices. By late 1977 among its total population of 13 million, there were 1.2 million foreign-born persons with residence permits, with the largest single group from Spain, followed by Italy, Colombia, and Portugal. Estimates of documented and undocumented immigrants in the country in 1979 are that there were at least a million Colombians, 200,000 from Ecuador and Peru, and 150,000 from the Dominican Republic.[24] Venezuela's economy deteriorated after 1979 and it was expected that large numbers of these immigrants would return home, but this did not happen.

Argentina has also attracted migrants from its neighbors since World War II, mainly Bolivia, Chile, and Paraguay, but also Brazil and Uruguay. In contrast to Venezuela, immigration was heavier during the 1950s than later. Most of these international immigrants traveled to Buenos Aires, where the unskilled and semiskilled found work in construction and services. The city also lured skilled workers and professionals, including many whose moves were politically motivated. After 1976 large numbers of professionals and skilled workers emigrated from Argentina to escape its deepening chaos as the military deposed Peron's widow "Isabelita" from her brief presidency and annual inflation reached 364 percent.

The largest and steadily increasing international movement of Latin Americans has been directed toward the United States, mostly from Mexico, but also from Central America, Colombia, and Caribbean countries. Total legal immigration into the U.S., including refugees, grew from less than 300,000 a year during the early 1960s to over 800,000 in 1980, averaging about 420,000 a year during the 1970s; 570,000 legal immigrants were recorded in 1985. Latin Americans dominated legal immigrant flows during the 1970s at 41 percent, but since then have slipped to second place, 35 percent, after immigrants from Asia, 47 percent, although Mexicans are the largest single group of immigrants legally admitted to the U.S.

Latin Americans undoubtedly dominate illegal immigration flows into the U.S. although the size of these flows is impossible to verify. Reliable data on the number of undocumented immigrants in the U.S. do not exist and estimates vary widely. A 1985 report on immigration statistics by the National Research Council concluded that the commonly quoted range of 3 to 6 million may be too high.[25] Research on the 1980 census suggests that 1.5 to 2.5 million illegal aliens were counted in that census, but data from other sources indicate that up to 3.5 million illegal aliens were in the U.S. in 1980. Mexicans accounted for over half of the illegal aliens recorded in the 1980 U.S. census. In June 1986 the U.S. Immigration and Naturalization Service reported that, based on Border Patrol apprehensions of undocumented aliens crossing the southern U.S. border during the first five months of 1986, total apprehensions for Fiscal Year 1986 (October 1985 through September 1986) would reach 1.8 million, up from 1.2 million in FY 1985 and a record annual high.[26] This partly reflects increased Border Patrol staffing and effectiveness; often the same person is apprehended repeatedly on successive attempts to enter the U.S. However, it probably also reflects increased movements from and through Mexico, stimulated by worsening economic conditions. Whether this will swell the numbers of undocumented Latin Americans who stay more or less permanently in the U.S. is impossible to ascertain from statistics on apprehensions. Numbers of undocumented Latin Americans are estimated to be on the increase in Canada, mostly from Caribbean countries.

Mexican migrants to the U.S. are concentrated in the Southwest, particularly Texas and California, and California has also drawn many Central Americans. Florida was the prime destination for refugees fleeing Cuba during the 1960s

Heading into the U.S. Latin America's economic downturns of the 1980s have added to the pressures to migrate in search of work.

after the Castro takeover in 1959 and again in 1980 with the arrival of 125,000 Cuban refugees in the Mariel boatlift. New York City and nearby New Jersey as well as a number of other metropolitan areas in the Northeastern states have also drawn Latin American migrants, along with several Midwestern states, notably Michigan and Illinois.

Although Central Americans have streamed into Mexico and swelled the flows from there into the U.S., currents within Central America have also been large, particularly when measured against the total populations of the countries involved. During the 1960s, tens of thousands of Salvadorans crossed the border into Honduras. The ensuing tensions erupted in warfare in 1969, after which most Salvadorans left Honduras, many to move on to Guatemala. Costa Rica has been a main destination for thousands of migrants from troubled Nicaragua since the late 1970s and more recently for migrants fleeing El Salvador. Panama has also attracted migrants from its Central American neighbors to the north as well as from Colombia, its nextdoor neighbor on the South American continent. These intraregional migrant flows within Central America were bound to increase with rising political and military violence in Nicaragua and El Salvador during the 1980s added to stressful economic conditions in almost all of the region's six countries.

Within the Caribbean region also, large numbers have migrated from the poorest to somewhat better-off countries, with Haitians moving nextdoor to the Dominican Republic, Dominicans to Puerto Rico, and migrants from several of the nations moving to the Bahamas and Jamaica.

Causes and consequences of international migration

International migrants move for the same reasons as migrants within nations. In fact, many observers urge that internal and international population movements within the Western Hemisphere should be considered parts of the same overall process, with the region's labor markets seen as international in scope. Centuries of unequal land distribution added to employment and earnings opportunities that have become even more limited with the economic downturns of the 1980s following two decades of steady economic growth and rising expectations, plus high rates of natural population increase have generated pressures that more than ever spill across international borders. They have also heightened political tensions that frequently erupt into violence, which propels still more international movement. And as with internal migration, these movements have been facilitated as transportation and communication—even direct-dial long distance telephone services—have become easier and cheaper.

In the countries to which they go, Latin American migrants fill the jobs that natives shun because they pay so little and offer limited chances for advancement. Migrants earn less than natives, on average, but more than they would doing the same work in their home countries. The savings they manage to send home or bring back with them mount up to large shares of the income of their home communities and of their countries' foreign exchange earnings. At the same time, it has been shown that many undocumented immigrant workers, like legal immigrants, pay taxes and contribute to social insurance programs in their destination countries.

Like internal migrants, international migrants are generally younger, better educated, and more highly skilled than those who do not migrate and similarly drain their sending countries' labor pools of their better equipped workers. Men outnumber women in movements directed toward agriculture—Mexicans traveling to the U.S., for example—and construction, while women predominate among immigrants in destinations with employment opportunities in services and light industry—non-Mexican groups in metropolitan areas in the U.S., for example. The labor transfer is often a complex pattern of successive migration streams. For example, construction in Mexico City draws on migrant labor from Guatemala to fill jobs left by Mexicans seeking better opportunities in the U.S. Southwest.

Population Growth and Economic Development

Neo-Malthusian views

The surge in Latin America's population growth after 1950 aroused much concern about the effect this could have on the region's economic development. The concerns came out in neo-Malthusian arguments about three ways in which demographic and economic variables are linked. The first, neo-Malthusians pointed out, is a straightforward accounting relationship: As the rate of population growth increases, so does the rate of income growth required to achieve or maintain a given rate of growth in income per capita. When the rate of population growth goes up, investment that might have raised income per capita must go instead into maintaining income per capita at the level it was when population growth was lower.

The second focuses on the relationship between age structure and investment. When a population's growth rate is increasing as a result of high fertility and declining mortality (rather than immigration), its age structure is heavily weighted with children, which means fewer producers per consumer than there are in a population with a low birth rate. Neo-Malthusians argue that this makes it difficult to raise savings and investment high enough to increase income per capita and, conversely, that a population with a lower birth rate will be able to achieve a higher level of income per capita over the long run. The higher-fertility population will eventually have a greater *total* output because it has more workers, but the time lag between birth and entry into the labor force—typically 15 to 20 years—gives the population with a lower birth rate an edge in building up capital, or investment, per worker, so that its output *per worker* is greater in the long run.

The third relationship involves the determinants of demographic change. Neo-Malthusians were among those who doubted that the theory of demographic transition, based on Europe's experience, would apply in Latin America—the idea that it takes a rise in living standards, or socioeconomic development, to reduce both mortality and couples' desires for large families and, hence, fertility. They pointed out that the mortality declines in developing countries after World War II had been brought about not by rising living standards but by imported medical technology and went on to argue that high rates of population growth would prevent these countries from achieving the higher living standards needed to reduce fertility. Developing countries were caught in a "Malthusian trap," in which high birth rates inhibit economic development, but without economic development, birth rates will not decline. The main policy conclusion of neo-Malthusian theory is that interventions to reduce birth rates are needed for countries to escape this trap.

While most Latin American countries fit the neo-Malthusian profile of rapid population growth, high levels of age dependency, and low savings rates during the postwar period, the region's social scientists and economic planners greeted the theory with a great deal of skepticism. They criticized it for overlooking what they regarded as fundamental institutional obstacles to development in the region and were suspicious of the motives of outside agencies who appeared to be pushing family planning rather than dealing with these more fundamental issues.

Structuralist views

This criticism stemmed from what came to be labeled the "structural" view of economic development. Latin American structuralists argue that unequal distribution of wealth, particularly land and other productive resources, and of political power is the fundamental obstacle to development in Latin America and trace this problem to the region's colonial experience, including the economic colonialism of the export era, and to industrialization policies that have aggravated rather than alleviated inequality in more recent decades. They challenged the neo-Malthusian argument that rapid population growth can be seen to be the root cause of underdevelopment when economic-demographic models are used to show that per capita income is higher with low birth rates than with high birth rates. Structuralists have also questioned the age dependency-savings link on the grounds that income inequality in Latin America has kept the incomes of the population masses so low that any additional consumption expenditures they have have had because of larger families cannot have been enough to make much difference in aggregate national savings and investment.

Following the structuralist line, Latin Americans played a major role in promoting what became the rallying cry of less developed countries at the 1974 World Population Conference in Bucharest: "Development is the best contraceptive." This was not meant to imply that fertility can be controlled without the use of some form of contraception but, in a challenge to neo-Malthusians, it argued that if fertility rates were to decline in developing countries, individual couples had to see some personal benefit in reduced fertility. Much of this benefit—or the perception of it—depended on their being able to raise their own living standards. With great income inequality, poor couples may not perceive that having fewer children would make much difference in their own living standards, even if the national economy were to grow faster. The extreme variant of this view held that putting resources into family planning programs rather than basic social development was counterproductive. At a minimum, family planning efforts will only succeed to the extent that they take account of the social and economic context in which they are promoted.

Emerging middle view

The polarization between neo-Malthusians and their critics that surfaced at the Bucharest Conference has narrowed since then. A middle view has emerged, based on recent experience in Latin America and other developing regions which shows that both socioeconomic development and family planning programs are important in bringing about fertility decline and that their effects are mutually reinforcing rather than conflicting.[27] Family planning agencies in Latin America have broadened the scope of the services they deliver, integrating their programs with general maternal and child health care and with nutrition programs, while social agencies once reluctant to include family planning now recognize it as an important element in efforts to improve the welfare of the poor.

The importance of both socioeconomic development and family planning programs was a major theme of the International Population Conference of 1984 and this conference took place in Mexico City, strongly supported by Latin American governments.

Although die-hard pessimists and optimists continue the debate on how rapid population growth affects development, this broader middle view recognizes the obstacles to development posed by both fundamental institutional inequalities and rapid population growth. Rapid population growth did not prevent a number of Latin American countries from achieving high rates of per capita income growth during the postwar period. However, continuation of high birth rates through the 1960s has left them with extra-large numbers of young people, which makes it harder to provide the jobs, housing, and other services that would be enough to raise the living standards of the poor masses. Rubens Vaz da Costa, a prominent Brazilian exponent of neo-Malthusian views, has called this the region's "social debt"[28] in contrast to the large financial debts that many Latin American countries have incurred in borrowing to build their industrial sector during the postwar period.

Princeton University population economist Ansley Coale came to a similar conclusion when he was invited to Mexico in 1976 to discuss how actual experience had measured up to projections he and his colleague E. M. Hoover had made in 1956. In those projections, published in their 1958 book, *Population Growth and Economic Development in Low-Income Countries,* Coale and Hoover had created alternative scenarios for Mexico which sought to show that continued high birth rates would inhibit growth of per capita income by lowering the amount of investment per worker. What Coale found in 1976 was not unlike the experience of a number of Latin American countries in the 20 years between the mid-1950s and mid-1970s. Mexican *population* growth had followed the high birth rate path projected in the Coale-Hoover model (the 1976 population size projected in that scenario differed by only a fraction of a percentage point from the actual estimated size in 1976), but the Mexican *economy* had grown at a rate that generated growth of per capita income that was closer to what had been projected in the low birth rate path.[29] Moreover, despite urbanization, increased education, and continued mortality decline between 1955 and 1975, the birth rate had remained high—contrary to the optimistic view of those who hold that fertility decline will follow economic and social progress.

Mexico's experience between 1955 and 1975 appeared paradoxical for pessimists who argued that rapid population growth inhibits economic growth as well as for optimists who were sure that social progress would reduce birth rates. The experience is much less paradoxical when one looks at distribution of income in contrast to average levels of income. That most of the population had not shared in the nation's rising prosperity is evident in World Bank figures showing that in 1977, the poorest 20 percent of Mexican households received just 3 percent of total household income, while the top 20 percent of households received 58 percent, and the top 10 percent received 41 percent of the total.[30] The economy that had produced high rates of growth in average output per capita is one that employs relatively few workers in its high-income, modernized sector. This, combined with the large numbers in the young adult ages born as birth rates remained high from 1950 to 1975, means that Mexico has been faced with a severe problem in providing productive employment for these cohorts. The problem has had political implications as well, because urbanization and increased education and media exposure, along with the national prosperity to the early 1980s, had raised expectations among these cohorts. Now in the mid-1980s, the prospects for fulfilling these expectations have become even dimmer as Mexico's

Productive work is scarce for the extra-large cohorts of young Mexicans born before fertility began to fall in the mid-1970s.

economy has collapsed with plunging prices for its oil, untamed inflation, increasing difficulty in meeting payments on its massive foreign debts, and austerity measures that have sharply reduced living standards and cut back the supply of modern-sector jobs even further.

Since the mid-1970s, Mexico's birth rate has declined. It may or may not be coincidental that in an abrupt shift from its long-standing pronatalist policy, Mexico launched a government family planning program in 1972, backed up with a new population law in 1974. Neo-Malthusians will see this as vindication of their argument that intervention is needed to bring down birth rates; structuralists will see it as supporting their position that social and economic changes lead to fertility decline. What seems clear is that the recent fertility decline in Mexico and other Latin American countries has resulted from the joint effects of increased availability of family planning and the economic and social pressures posed by the gap between young adults' aspirations and their ability to realize them.[31]

Population Policy

One of the mechanisms promoted by international development assistance agencies in order to elicit developing country responses to the problem of rapid population growth was establishment of official population policies, usually in the form of targeted reductions in population growth rates and explicit incorporation of demographic variables in development plans, or at least official support of family planning programs, even if for purposes other than slowing population growth. This was a major goal of the 1974 World Population Conference in Bucharest, which sought adoption of a World Population Plan of Action by developing country representatives.

Latin Americans were generally cool and in some cases openly hostile to the Plan as originally drafted, charging that it represented an attempt by neo-Malthusians in the industrialized countries to create an antinatalist "bandwagon" that served their own interests, rather than those of developing countries. Argentina and Cuba took a lead in reorienting the Plan toward the "development is the best contraceptive" philosophy that characterized the document as finally adopted. The Bucharest experience revealed the political sensitivity of Latin Americans and other developing country representatives on the population question at that time, particularly to what they perceived as aggressive interference in what was essentially an internal affair. Those attitudes had changed ten years later when it was the developing rather than developed countries, and Latin American countries in particular, that called for the 1984 International Population Conference in Mexico City where the emphasis was on both development and family planning.

Shaping policy

Traditional Latin American attitudes on population policy have reflected at least three major intellectual, political, and cultural currents. Intellectual thinking on relationships between population growth and economic development has been strongly influenced by the structuralist school. Two other currents are represented by the nationalistically oriented military which, directly or indirectly, has played a major role in the region's recent politics, and by the Catholic Church. Recurrent themes in nationalistic thinking are national sovereignty and security. These can be traced back to historic concerns about the need to establish settlements in insecure frontier areas to prevent others from doing it first: "to govern is to populate." While not exclusively the domain of the military, these concerns have been root reasons for the resistance of Latin America's military governments to "demographic interventionists."

In assessing the influence of the Catholic Church, to which the majority of Latin Americans belong at least nominally, it is important to distinguish the role of the Church in popular culture from the official teaching Church. It is in the latter role that the Latin American Church hierarchy wields its main political influence, but the former is of key importance in assessing the Church's influence on the practice of family planning. The conservative wing of the hierarchy has firmly backed the Church's prohibition of artificial birth control, as laid down in the *Humanae Vitae* of 1968, particularly after Pope John Paul II's visits to Latin America. Even the more liberal wing of the hierarchy, which has often challenged right-wing military regimes on human rights issues, is conservative on family planning. Its view on development issues, "liberation theology," is close to that of structuralists.

At times the Latin American Church hierarchy has used or attempted to use its political influence to alter or block family planning programs, but this has not been a major obstacle to such efforts. Nor has the official prohibition of artificial contraceptives proved to be a major influence at the popular level, where religious affiliation does not imply strict adherence to Church teachings. Family planning organizations were quick to learn that a non-confrontational approach was the most effective way to deal with the Church. Often it was better just to act without first trying to build public support through a process that would require the Church either to oppose something that was being promoted in the public interest or to abrogate its theological stance on birth control.

Current population policies

Despite the uproar over population policy stirred up at Bucharest, Latin America's two most populous countries, Brazil and Mexico, adopted population policies in 1974. Mexico's then-president Luis Echeverria had already announced his government's intention to adopt a strong population policy in his State of the Union speech of September 1972. This was formalized by a population law implemented at the beginning of 1974, which called for stabilization of population growth. Since then, Mexico has established a National Population Council, set a target of an annual 1 percent rate of growth by 2000, and implemented a broad-based national family planning program (see Box 5, page 42). Brazil articulated an official policy on population in its 1974 national development plan, which called for a rate of population growth consistent with overall development objectives. The national government has given tacit approval to widespread family planning efforts by private organizations and state governments, but only recently announced the first federally funded family planning services, for employed persons covered by the country's health plan (see Box 5).

Brazil's cautious approach typifies that of most Latin American countries. For over a decade, the Population Council's Dorothy Nortman has compiled data on

Box 5. Three Approaches to Family Planning: Brazil, Colombia,

Brazil, Colombia, and Mexico account for 61 percent of Latin America's total 1986 population of 419 million and 63 percent of its 13 million annual births. All three experienced rapid population growth after 1950 as mortality declined and fertility stayed high, but their fertility has declined sharply since the late 1960s, with the decline starting somewhat earlier in Brazil and Colombia than in Mexico. By the early 1980s Colombia's birth rate was 29 per 1,000 population, down from 46 in the early 1960s, Brazil's birth rate had fallen from 43 to 30, and Mexico's from 45 to 32.

Already by the early 1960s the countries had made some socioeconomic gains, as measured by urbanization, life expectancy, literacy, and other indicators. That fertility had not yet declined seemed to support the argument that this would not happen without increased access to fertility control to back up socioeconomic change. Easier access to contraceptive methods was indeed a key element in fertility declines once started, although the countries' approaches to family planning and official population policy have differed markedly.

Colombia adopted an official policy to support family planning explicitly to reduce its population growth rate in 1970 and was a Latin American pioneer in organized family planning efforts before that. PROFAMILIA, its International Planned Parenthood Federation (IPPF) affiliate, was founded in 1965 and currently accounts for about half of the country's organized family planning services. The government provides family planning along with maternal and child health services through the Ministry of Health. By 1980 more than half of women of childbearing age in union were using contraception, with 43 percent using modern methods (see Figure 2, page 17). Colombia's approach was one of quiet diplomacy; family planners avoided confrontation with the Church and other groups by saying as little as possible as they went about their work. In recent years commercial sales of contraceptives have grown in importance.

Surveys in ten states suggest that contraceptive use in Brazil may now be higher than in Colombia, but the government's approach to family planning has been quite different. Beginning with a declaration to the

national population policies in developing countries. Her latest report, published in 1985, ranks only eight Latin American countries in the (a) category of countries with specific goals to reduce population growth rates through family planning programs.[32] These are Barbados, Colombia, the Dominican Republic, El Salvador, Guatemala, Jamaica, Mexico, and Puerto Rico. The (c) group of countries that either lack any policy or are explicitly pronatalist includes only Bolivia and Chile, although Argentina and Uruguay, not covered in Nortman's survey, should also be considered in this class. Chile's inclusion represents a turnabout. Indeed, with a strong antinatalist policy launched in 1966, Chile was a pioneer Latin American member of the (a) group until the military government adopted a pronatalist policy in 1979.

Eleven of the 22 Latin American countries covered by Nortman fall in her (b) category: those which do not overtly seek to reduce growth rates, but support family planning for other reasons. This covers a wide range of policies as well as family planning implementation. There is Costa Rica, with no explicit policy to reduce population growth but with a family planning program, established in 1968, that was once one of the region's most effective. Brazil and Peru, by contrast, have official policies to seek growth rates consistent with development objectives but have not judged their rapid population growth rates to be inconsistent with those objectives. Nor have they implemented vigorous family planning programs.

Clearly there is no single answer to how important an official population policy is for the reduction of population growth rates in Latin America. In Mexico,

and Mexico

1974 World Population Conference, government officials have spoken of the rights of couples to have access to family planning services and of the state's responsibility to provide them to those who could not otherwise obtain them. But there has been little action to back these statements at the federal level. Most of the growth in contraceptive use has come about through commercial sales, physicians, and private voluntary organizations, led by BEMFAM, Brazil's IPPF affiliate, founded in 1965. Eight state governments, mostly in Brazil's poor Northeast, have contracted with BEMFAM to provide family planning clinics, health posts, and community-based distribution of contraceptives. Only in 1986 has the federal government agreed to include family planning in the health services provided through its social welfare organization. Since these cover only employed persons and their families, it remains to be seen what impact this will have on the national contraceptive use rate.

Contraceptive use in Mexico began to increase several years later than in Colombia and Brazil but by 1982 was up to 48 percent for all methods among women of childbearing age and 35 percent for modern methods (Figure 2). Until 1972 Mexico had a pronatalist population policy. In an abrupt shift, government family planning programs were launched in that year and the population law rewritten in 1973 to announce that this had been done "with the object of . . . stabilizing the growth of the population." In 1976 President Lopez Portillo called for reductions in the population growth rate to 2.5 percent in 1982 and 1.0 percent in 2000. A National Population Council was established to integrate population into development planning. Government family planning services were quickly expanded, and vigorously promoted, throughout the country, chiefly through the health networks of the Ministry of Health and the Mexican Institute of Social Security. Mexico contrasts with Colombia and Brazil in that much of its increased contraceptive use was the result of these public programs. In 1982 the public sector was the source of supply for 53 percent of women reporting use of contraception, compared to 31 percent for pharmacies and 15 percent for private clinics, hospitals, and physicians.

a policy shift introduced with much fanfare created broad political support for the increased access to family planning that followed and helped to bring down fertility. Colombia, on the other hand, was much more circumspect about official policy pronouncements, but moved early and vigorously to establish family planning programs that contributed to a fertility decline beginning several years earlier than Mexico's (see Box 5). Brazil has neither declared a strong policy nor—until 1986—put national funds into family planning but nonetheless has experienced a fertility decline comparable to those of Colombia and Mexico (see Table 5, page 16).

Other policy concerns

While population growth and fertility rates have dominated recent population policy debate in Latin America, other issues have also surfaced. Most of the governments have long been concerned about unbalanced population distribution and urbanization, particularly the overconcentration of population in the largest cities. Some redistribution programs have been tried: Amazonian frontier settlements; Brazil's new capital in Brasilia, Guyana's in Ciudad Guyana, Argentina's proposed new capital city in Viedma; and Mexico is now trying to promote its secondary cities. But policies and large-scale programs to redistribute population are difficult because the process of population redistribution and its links to other social and economic changes are so complex.

Swelling flows of international migration in the hemisphere have generated similar concerns. This was a major policy issue among Latin American parliamentarians gathered to discuss population and development in Brasilia in late 1982 and again at the 1984 International Population Conference in Mexico City. Several countries in the region have tightened their laws and policies on immigration or are moving in that direction. Sparking most debate is the proposed legislation to sharply restrict immigration into the United States, largely aimed at stemming the flood of undocumented immigrants surging over the U.S.'s southern border. Some Latin American observers have questioned how far national governments should go in restricting the access of migrants from poor countries to job opportunities in better-off countries, notwithstanding the displacement of native workers and other problems this may cause in those countries. Key political issues stirring controversy in the U.S., on the other hand, are the extent to which undocumented immigrants are indeed competing with natives and legal immigrants for jobs and whether they should be entitled to public benefits such as health care and schooling for their children.

Future Population Prospects

Even though population growth rates have slowed and will continue to fall, Latin America has the potential to add large numbers to its population in the coming decades. A chief reason for this is that even after some decline, fertility rates remain high. All countries in the region except Chile, Uruguay, Puerto Rico, Cuba, and Trinidad and Tobago still have far to go before reaching the "replacement" level fertility of about two births per woman (see Table 5, page 16). Another reason lies in the very large population base that Latin America has accumulated during recent decades of rapid population growth. Although the growth *rate* had declined, that rate now applies to such a large base that the *numbers added* each year continue to mount. Demographers have likened this phenomenon to the momentum of massive physical objects: Large populations take about a generation to slow to zero growth after fertility reaches the replacement level because of the "demographic momentum" built into their age structures swollen with extra-large proportions of young people in or about to enter the childbearing ages as a result of past high fertility. During this time a population may well double in size.[33]

Population projections are a hazardous exercise because they require assumptions about the future paths of birth, death, and migration rates—all of which are influenced by social and economic forces that are hard to predict. Population projections are not predictions. The best demographers can do is show that if a particular set of rates are applied over a given period, then there will be a population of size "x" and age-sex structure "y" at the end of the period. When the rates have been changing rapidly, as recently in Latin America, it is particularly difficult to settle on plausible future rates. The standard practice has been to use a range of rates that combine faster and slower change with continuation of recent trends to give "low," "medium," and "high" variants of the projections.

Past projections of Latin America's population by the United Nations illustrate the problems. In 1951 the United Nations in its "medium" projections for Latin America projected a population of 321 million for the region in 1980. This was about 11 percent below the actual 1980 population of 361 million, according to estimates made by the U.N. in 1984. The 1951 projection had underestimated the pace of mortality decline. The U.N.'s 1968 projections took account of mortality decline, but failed to anticipate the dramatic decline in fertility that occurred during the 1970s, so its medium projection for the region in 1980, 377 million, was 4 percent higher than the actual 361 million of 1980.[34]

The latest U.N. projections, prepared in 1984, take fertility declines into ac-

Table 8. Population Projections: 1985-2025

(Numbers in thousands)

Subregion and country	Total population			Population aged 15-24		
	1985	2000	2025	1985	2000	2025
Total	404,806	546,395	778,662	81,934	103,731	127,467
South America						
Argentina	30,564	37,197	47,421	4,770	6,635	7,395
Bolivia	6,371	9,742	18,294	1,207	1,890	3,686
Brazil	135,564	179,487	245,809	27,566	33,671	38,854
Chile	12,038	14,792	18,301	2,455	2,380	2,639
Colombia	28,714	37,999	51,718	6,261	7,192	8,259
Ecuador	9,378	13,939	22,910	1,913	2,695	4,017
Paraguay	3,681	5,405	8,552	750	1,074	1,519
Peru	19,698	27,952	41,006	3,989	5,454	6,828
Uruguay	3,012	3,364	3,875	486	536	563
Venezuela	17,317	24,715	37,999	3,550	4,794	6,407
Mexico and Central America						
Costa Rica	2,600	3,596	5,099	561	676	812
El Salvador	5,552	8,708	15,048	1,105	1,738	2,799
Guatemala	7,963	12,222	21,668	1,541	2,479	4,228
Honduras	4,372	6,978	13,293	864	1,433	2,680
Mexico	78,996	109,180	154,085	16,552	22,095	24,666
Nicaragua	3,272	5,261	9,219	656	1,066	1,752
Panama	2,180	2,893	3,862	460	536	593
Caribbean						
Cuba	10,038	11,718	13,575	2,251	1,555	1,750
Dominican Republic	6,243	8,407	12,154	1,388	1,621	1,957
Guyana	953	1,196	1,562	214	234	220
Haiti	6,585	9,860	18,312	1,293	1,929	3,677
Jamaica	2,336	2,880	3,704	570	534	519
Puerto Rico	3,451	4,185	5,121	674	690	700
Suriname	375	469	625	90	89	91
Trinidad & Tobago	1,185	1,473	1,897	255	265	267
Others[a]	2,368	2,795	3,553	517	471	500

Source: UN, *World Population Estimates and Projections as Assessed in 1984*, medium variant.

[a] Includes English-, French-, and Dutch-speaking Caribbean countries and territories not listed individually in the table.

count. The medium variant of these projections puts Latin America's population at 546 million in the year 2000 and 779 million in 2025 (see Table 8). The projected 2025 figure is close to double the region's estimated 1985 population of 405 million, even though the projections assume substantial declines in growth rates over those 40 years. Stabilization of Latin America's population, according to the U.N.'s most recent long-range projections, prepared in 1980, will come only at the end of the 21st century, when the number has climbed to about 1.2 billion.

Equally awesome are the added numbers that lie in store for individual countries and subregions, as shown in Table 8. Brazil's population, for example, is projected to grow from 136 million in 1985 to 246 million in 2025, adding 110 million people in 40 years. At the same time, Mexico is projected to nearly double its 1985 population of 79 million to 154 million in 2025, while the total population of the six Central American countries goes up more than two-and-a-half times, from 26 to 68 million.

The countries are already hard-pressed to support their current populations. Whether they will be able to support twice these numbers in less than 40 years will depend on social, political, and economic changes that may themselves be determined by population pressures. It is hard to envision how populations of such magnitudes can be supported without profound changes in existing institutions or how those changes, induced by population pressure, would not themselves slow population growth more quickly than anyone had imagined. Here one can only speculate on possible future scenarios that take into account humankind's proven potential for adaptation and technical advance to accommodate added numbers, but also the risk of demographic catastrophes that have plagued humanity in the past.

Pressures ahead

The short-run future requires little speculation. In the next decade or two Latin America will feel the certain impact of its very rapid population growth during 1955-75 in a number of ways. Employment will be a central problem. The young people entering the labor market during the remainder of the 1980s and in the 1990s were born between 1960 and 1980. Even though birth *rates* declined during the 1970s, the pressure for new jobs will continue through the 1990s because *numbers* of births continued to mount, owing to the large population base that had accumulated. The United Nations projects that Latin America's "youth" population, young adults aged 15-24, will grow by 22 million, from 82 to 104 million, in the 15 years between 1985 and 2000, and will further increase to 127 million in 2025 unless fertility rates decline more rapidly than now projected (see Table 8).

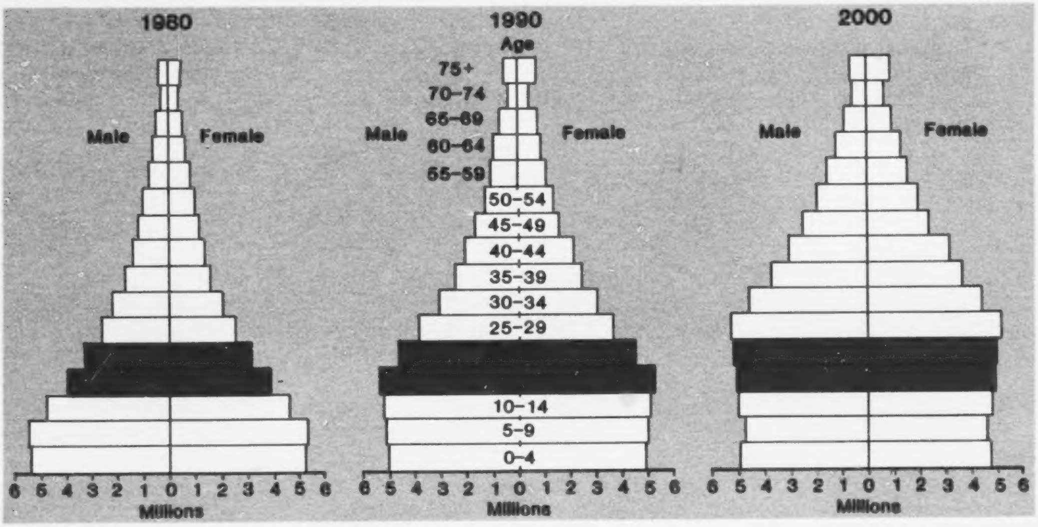
This "youth wave" can be seen in the population age pyramids for Mexico in 1980, 1990, and 2000, shown in Figure 5. Prepared by Mexico's National Population Council, the projections for 1990 and 2000 assume that Mexico will reach its target of a 1 percent annual rate of population growth by 2000, through reduced fertility and net emigration of 110,000 persons a year. Births before 1980 are expanding the youth age groups, so that by 1990 the widest band is for males and females aged 15-19.

Continued rapid urban growth will also be a prominent feature in Latin America's demographic picture during the late 1980s and 1990s. It is almost certain that towns and cities will absorb all of the region's natural population increase during the coming decades, plus the spillover from rural areas through migration. Figure 3 (page 25) has highlighted the staggering populations projected for the largest metropolises in 2000. U.N. projections indicate that by the end of this century, the region will have more than 50 cities with populations of over a million.[35] This suggests that even if planners succeed in dampening the growth of the very largest cities, the problems of coping with mass city populations will only spread to other localities.

Latin America's cities will bear the brunt of the employment problem. The labor-saving bias of postwar industrialization has already created an imbalance between the supply and the demand for jobs, and demographic factors will increase that demand in coming decades. The problem is further exacerbated by the credit restrictions that many Latin American governments have recently been forced to adopt in order to manage their large foreign debts and cope with high interest rates in international financial markets. Other needs generated by rapid urban growth—housing, public transportation, water and sanitation, schools, and hospitals and health facilities—are also feeling the pinch of tighter government budgets and the unwillingness of foreign banks to further extend themselves in what they see as very risky situations.

Unabating economic and demographic pressures also point to even larger flows of international migration within the Western Hemisphere, at least in the short run. For the United States, the

Figure 5. Youth Aged 15-24 in Mexico's Population Age Pyramid: 1980, 1990, 2000



Source: Consejo Nacional de Población and Instituto Nacional de Estadística, Geografía et Informacática, *Proyecciones de la Población de México y de las Entidades Federativas: 1980-2010* (Mexico City: 1985).

proximity of Mexico and Central America and their limited capacity to provide productive employment for their young people pose a special challenge. Young Mexicans and Central Americans aged 15-24 account for over 8 million of the projected 22 million increase in Latin America's youth population between 1985 and 2000 (see Table 8). Improved transportation and communication have helped internationalize the region's labor market flows. These flows are difficult, and therefore expensive, to measure and control. But they are likely to continue despite the rising outcry in some receiving nations against competition from immigrants willing to accept lower pay and poorer working conditions than natives in jobs that they view as better than having no jobs in their home countries.

Because of international migration, population pressures and the problems they generate are increasingly regional in scope. In the coming years, the countries of the Western Hemisphere that have had slower population growth since World War II are bound to share in the consequences of the rapid growth experienced by their neighbors. ☐

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